

Graduation Projects

Academic Year

2025–2026

College of Computer Science
and Information Systems



مشاريع التخرج

العام الجامعي

1447–1448 هـ

كلية علوم الحاسب
ونظم المعلومات

These pages present the graduation projects completed by students of the College of Computer Science and Information Systems at Najran University in the academic year 1447–1448 AH (2025–2026).

The graduation project is the capstone of the bachelor’s programs in Computer Science and Information Systems. Over two consecutive courses, Graduation Project 1 and Graduation Project 2, student teams work under the supervision of a faculty member to define a problem, design and build a solution, and present it to an examination committee.

Each page presents one project: its aim, how it works, its main features and the technologies the team used, with an image taken from the team’s own documents. The texts are editorial summaries of each team’s final report and presentation, prepared by the Graduation Projects Unit.

تعرض هذه الصفحات مشاريع التخرج التي أنجزها طلاب وطالبات كلية علوم الحاسب ونظم المعلومات بجامعة نجران في العام الجامعي 1447-1448 هـ (2025-2026م).

يمثل مشروع التخرج الخبرة الختامية في برنامجي البكالوريوس في علوم الحاسب ونظم المعلومات؛ إذ يعمل الطلاب في فرق على مدى مقررین متتاليين، مشروع التخرج 1 ومشروع التخرج 2، بإشراف عضو من هيئة التدريس، فيحددون مشكلة ويصممون لها حلاً وينفذونه، ثم يعرضونه أمام لجنة مناقشة.

تعرض كل صفحة مشروعًا واحدًا: هدفه، وطريقة عمله، وأبرز خصائصه، والتقنيات التي استخدمها الفريق، مع صورة من وثائق الفريق نفسه. والنصوص ملخصات تحريرية للتقرير النهائي والعرض التقديمي لكل فريق، أعدتها وحدة مشاريع التخرج.

COLLEGE VISION

Leadership in Computing Education and Research and Active Contribution

COLLEGE MISSION

Preparing distinguished graduates through high-quality and continuously developed programs

DEPARTMENTS

الأقسام العلمية

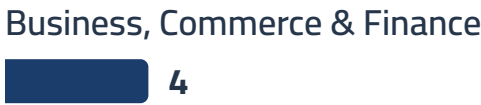
Computer Science	علوم الحاسب
Information Systems	نظم المعلومات
Network and Communications Engineering	هندسة الشبكات والاتصالات

The year at a glance

العام في سطور

Projects by domain

Number of projects in each domain



المشاريع حسب المجال

الخدمات الجامعية

الثقافة والتراث والسياحة

التعليم والتعلم

الوصول الشامل والدمج

الأعمال والتجارة والمالية

الأمن السيبراني والخصوصية

الصحة والرفاه

المدن الذكية والتنقل والنقل

البيئة والزراعة والطاقة

الإعلام والألعاب والترفيه

Most-used technologies التقنيات الأكثر استخدامًا

Number of projects for each technology used in 7 or more projects



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Computer Science

علوم الحاسب

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Students طالبًا وطالبة

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01

A Platform for Student Activities, Clubs, and Events

Django web platform for campus events and clubs

A web platform where students find and register for campus events, staff run them, and administrators oversee users.

Students at a university often learn about events through scattered channels, which makes activities hard to find and registration hard to track. The team set out to bring campus events and clubs into one place and to give each kind of user the tools their role needs.

The team built a Django web application backed by SQLite, with a Bootstrap interface. Students browse an events calendar and a club directory, register or unregister for an event with one click, and follow their registrations on a My Events page. Staff organizers create, edit and delete events and view participant lists, while administrators manage users and roles. The team tested the system manually, using 30 student accounts and 5 staff accounts, in Chrome, Firefox, Edge and Safari.

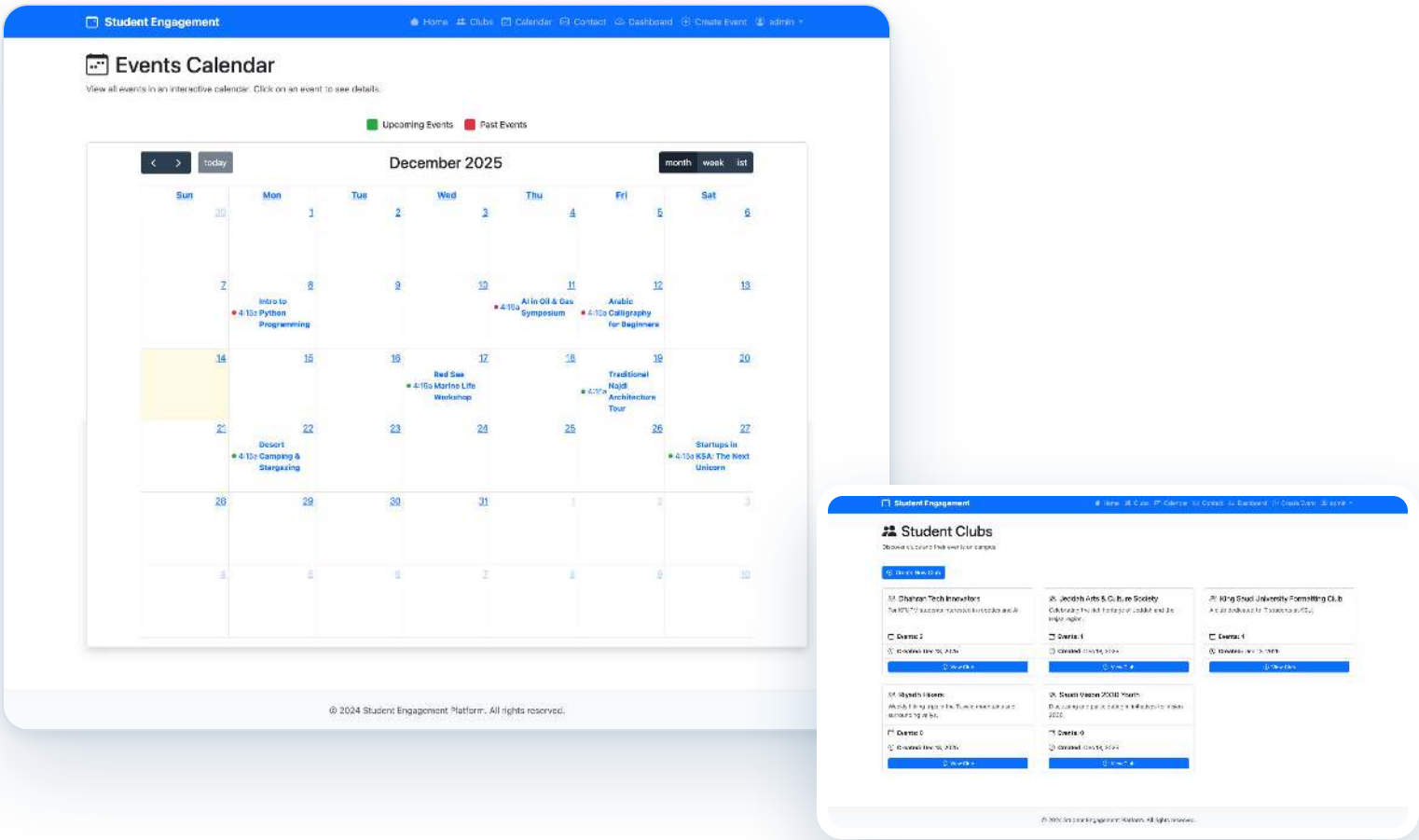
BUILT WITH

- Django
- Python
- Bootstrap
- SQLite
- HTML/CSS/JavaScript
- django-crispy-forms

TEAM

Thikra Hadi Ail Al-Harith
Shahad Hussin Ali
Wafqah Saleh Al Jotar

Sfiyah Salman Alhuraishi
Lamia Bader



- 1 Events calendar page showing upcoming and past events
- 2 Student clubs directory with event counts

KEY FEATURES

- Events calendar and club directory
- One-click event registration for students
- Organizer dashboard with participant lists
- Role-based access for administrators

SUPERVISOR

Dr. Abdullah Mari Alqahtani

SERVES

Students, staff organizers and administrators

02

AI-Powered Skin Analyzer & Makeup Recommender

محلل البشرة الذكي واقتراح المكياج
ومنتجات العناية بالذكاء الاصطناعي

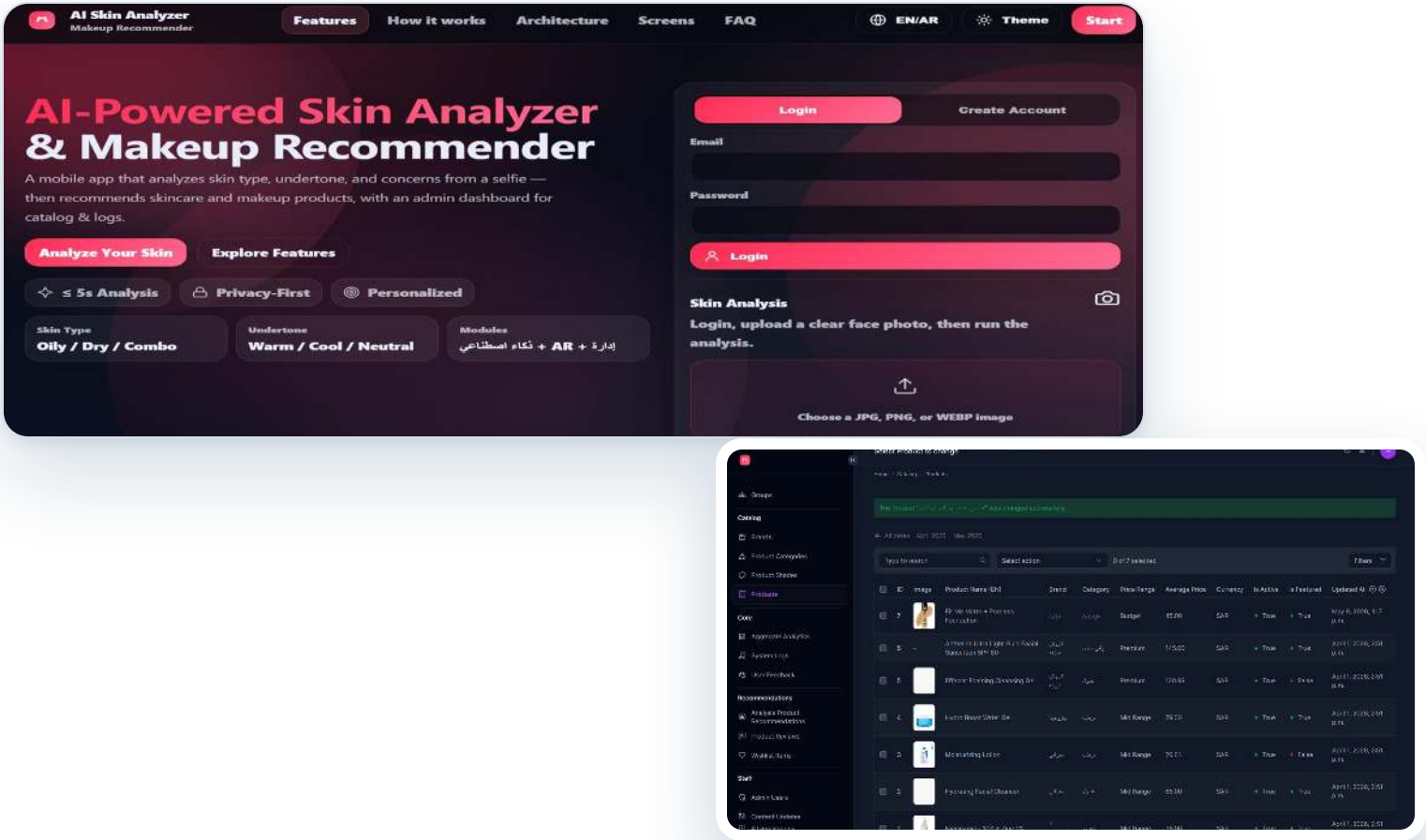
A mobile app that analyzes a facial photo and recommends skincare and makeup products, with virtual makeup try-on.

Choosing skincare and makeup is often trial and error: many people do not know their skin type, undertone or skin concerns, and beauty apps rely on questionnaires or filters instead of analyzing the skin.

The team built a bilingual Flutter app with a Django REST Framework and MySQL back end. From a facial photo, three TensorFlow models classify skin type, detect undertone and flag skin concerns; the app then recommends products, keeps a history and a wishlist, and offers virtual makeup try-on. The fine-tuned skin-type model reached about 60.8% validation accuracy on the team’s data split.

BUILT WITH

- Flutter
- Django REST Framework
- TensorFlow
- OpenCV
- MySQL
- MobileNetV2



- 1 System website home page with skin analysis upload
- 2 Admin dashboard product catalog management page

KEY FEATURES

- ◆ Skin type, undertone and concern detection from a photo
- ◆ Personalized skincare and makeup recommendations
- ◆ Virtual makeup try-on
- ◆ Admin dashboard for products and users

TEAM

Reim Eihiy Mohammed Alasheir
Al Btool Hussein Sban Al Yami

Aljazi Mohammed Nasser Alshaq
Layan Mohammed Abdullah Al-Dosari

SUPERVISOR

Ms. Soad Mohammed

SERVES

Skincare and makeup
shoppers in Najran

8

Female Campus
Second Semester

03

CrowdCast

Crowd prediction for World Cup 2034 restaurants and cafes

A web platform that predicts visitor numbers and crowd levels at restaurants and cafes near World Cup 2034 stadiums.

Saudi Arabia will host the FIFA World Cup in 2034, and restaurants and cafes near the stadiums are expected to face congestion at peak times and idle capacity at others. The team cited crowd-management problems at earlier tournaments and large events as the reason for a system that anticipates demand instead of reacting to it.

The team built CrowdCast, a Flask web application backed by MySQL. Because no real visitor records were available, the team generated a synthetic dataset anchored on real restaurant locations taken from the HOTOSM OpenStreetMap points of interest and stadium coordinates. A linear regression model built with scikit-learn estimates visitors per hour and a decision tree classifies crowd level as Low, Medium or High. Separate dashboards serve visitors, staff, developers and administrators, with live updates over WebSockets. On the team’s held-out synthetic test data, the report states over 97% classification accuracy and an R-squared above 0.94.

BUILT WITH

Python

Flask

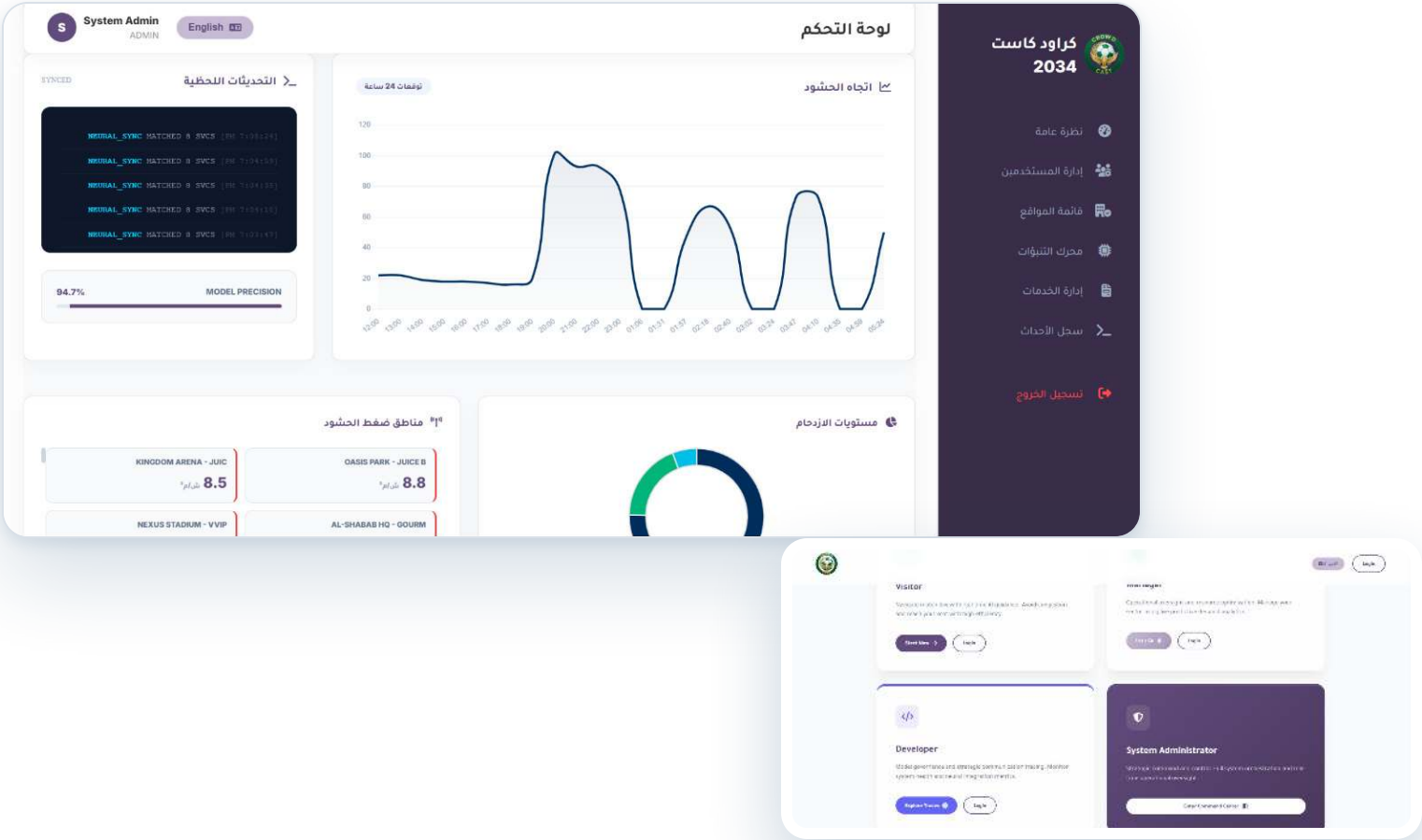
MySQL

SQLAlchemy

scikit-learn

Chart.js

Docker



- 1 Administrator dashboard with 24-hour crowd trend and crowd pressure zones
- 2 Landing page with portals for visitors, managers, developers and administrators

KEY FEATURES

- Hourly visitor count prediction
- Low, Medium and High crowd classification
- Role-based dashboards for four user types
- Live dashboard updates over WebSockets

TEAM

Layla Hamad Mohammed Al-Yami
Renad Misfer Salem Al Zulaieq

Manar Hafez Issa Zamdi
Saidah Al Khreem

SUPERVISOR

Dr. Jarallah Alqahtani

SERVES

Event organizers, venue staff,
restaurant managers and visitors

9

Female Campus
Second Semester

04

Destination 2034

World Cup 2034 ticket and travel booking website

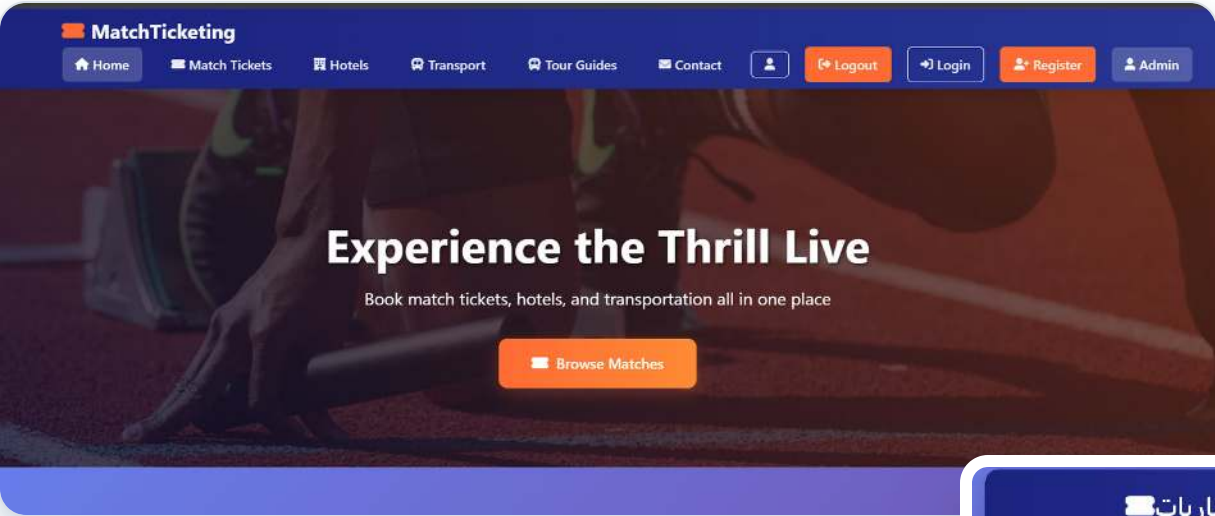
A website where World Cup 2034 fans and tourists book match tickets, hotels, transport and tour guides in one place.

Visitors to the 2034 FIFA World Cup in Saudi Arabia would otherwise rely on several separate platforms for matches, accommodation and transport. The team identified this as a source of confusion, errors and difficult trip planning, and noted that most existing booking systems are complex and offer no integrated experience for fans and tourists.

The team designed and built Destination 2034, a PHP and MySQL website where visitors buy match tickets, book hotels and transportation, contact tour guides and browse tourist sites. Users register and log in, while administrators sign in through a separate page and manage hotels, transport and bookings. The database holds tables for users, reservations, hotels, guides, tickets, transportation, payments, chat and administrator actions. The team tested the site with a small group of university colleagues who tried sample bookings; the documents report no quantitative results.

BUILT WITH

- PHP
- MySQL
- JavaScript
- Bootstrap
- HTML



- 1 Home page of the MatchTicketing website with booking navigation
- 2 Arabic account registration page of the booking website

KEY FEATURES

- ◆ Match ticket booking
- ◆ Hotel and transport reservations
- ◆ Tour guide and tourist site listings
- ◆ Separate user and administrator logins

TEAM

Misfer Naji Al Mutlaq
Ali Yasin Aldousari

Faris Naseer Al Sagoor

SUPERVISOR

Dr. Sultan Alamer

SERVES

World Cup 2034 fans, tourists,
guides and hotel owners

10

Male Campus
First Semester

05

Electronic Horse Platform Using ML (EHP&ML)

Horse trading, treatment, transport and supplies

A planned platform that brings horse trading, veterinary treatment, transport and supplies into one application for Saudi horse owners and service providers.

Horse owners, buyers and traders in Saudi Arabia have no central place to buy, sell or auction horses, and reputable transport, treatment, supplies and feed are scattered across separate sources.

The team designed the Electronic Horse Platform, one application with Arabic support and five role-based interfaces: administrator, client, veterinarian, supplier and delivery official. Following the waterfall model, they produced UML and entity-relationship diagrams and planned the build with C#, Visual Studio and Microsoft SQL Server, with Android screens. A machine-learning module based on multiclass classification adds a lucky-draw entry to horse auctions. The report presents the analysis, design and interface pages; building, testing and publishing the application remain future work.

BUILT WITH

C#

Visual Studio

Microsoft SQL Server

Android Studio

Android XML

TEAM

Tariq Mahdi Balharith
Fayyad Dahshal Al-Harhi
Ali Hadi Hamad Al Shehi

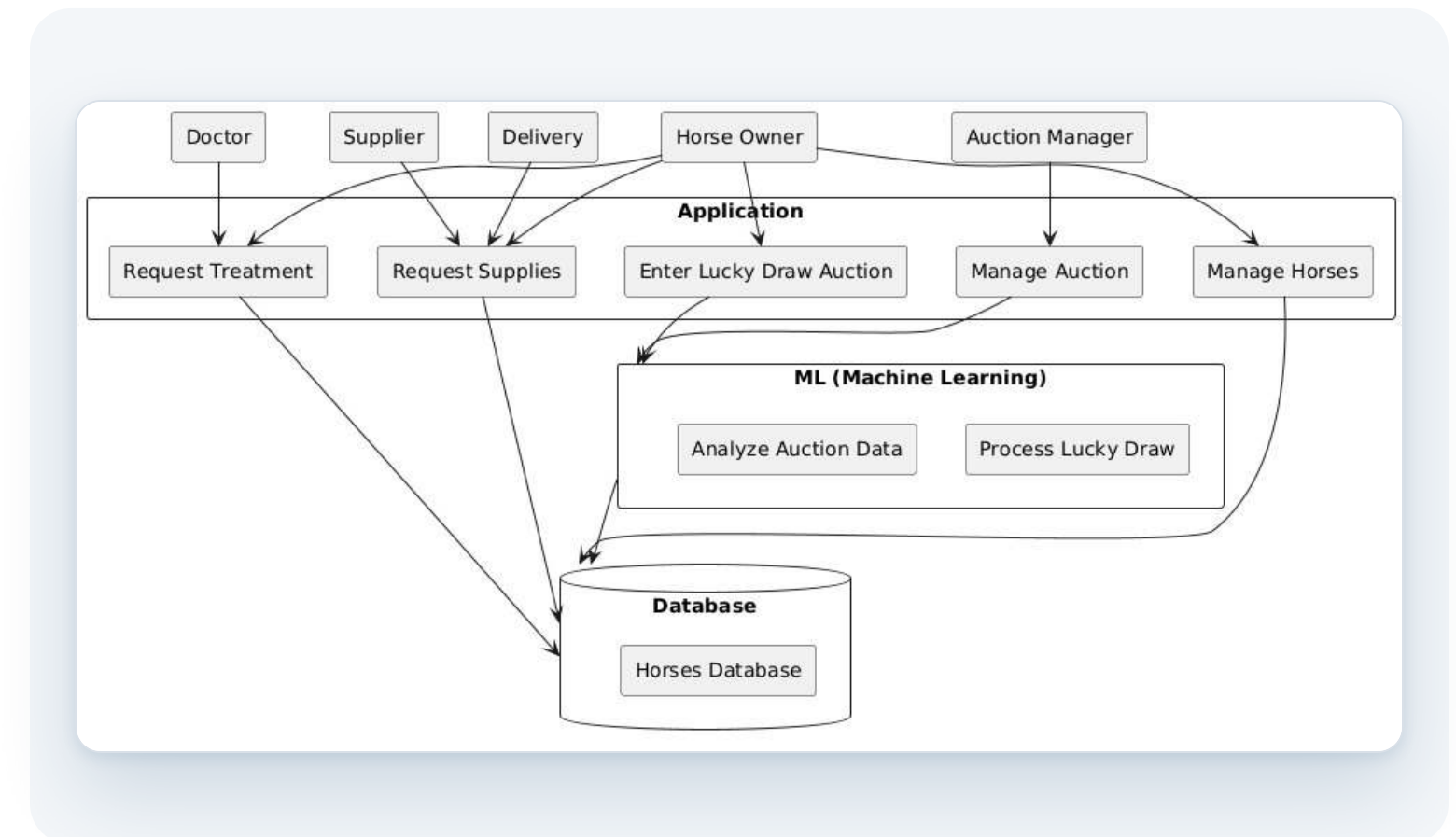
Muhammad Hadi Al-Ajmi
Muhammad Saeed Al-Kulaib
Salem Muhammad Al-Mutared

SUPERVISOR

Dr. Ahmad Almasabi

SERVES

Horse owners, buyers
and service providers



Planned system overview: user roles, application functions, machine-learning module and database

KEY FEATURES

- ◆ Buying, selling and auctioning horses
- ◆ Veterinary treatment requests and scheduling
- ◆ Transport booking and supply requests
- ◆ Machine-learning lucky draw for auctions

06

Erthna

Website for archaeological and heritage sites in Saudi Arabia

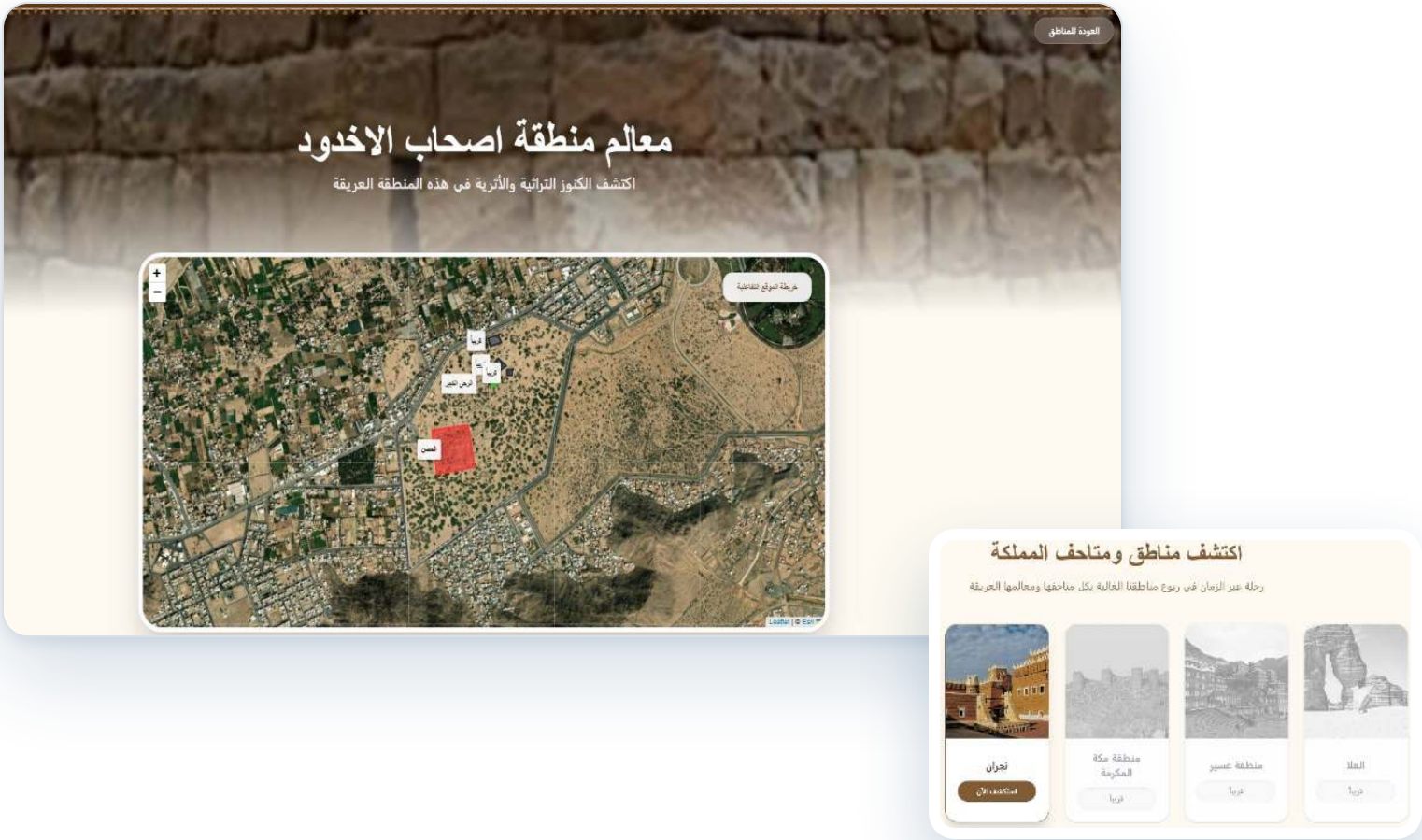
A bilingual website with interactive maps and augmented reality that helps visitors explore archaeological and heritage sites in Saudi Arabia.

Saudi Arabia’s tourism sector has grown, but visits to archaeological and heritage sites usually offer only direct viewing or a guide board, with little interactive or educational content. Information in other languages is also limited, which restricts visits by international tourists.

The team built Erthna, a heritage tourism website, using the Al-Ukhdood site in Najran as its prototype. It is written with Next.js, React and Tailwind CSS and offers Arabic and English interfaces. An interactive Leaflet map shows the site’s landmarks, and MindAR augmented reality displays 3D models when a visitor points a camera at a landmark. Supabase stores the site data and the badges awarded for completing a visit. The team ran unit, integration and UI/UX tests and scenario evaluations, and the report concludes with a working prototype that combines the map and augmented reality features.

BUILT WITH

- Next.js
- React
- Tailwind CSS
- React-Leaflet
- Supabase
- MindAR



- 1 Interactive map page of the Al-Ukhdood archaeological site in Najran
- 2 Region selection page with Najran available and other regions marked coming soon

KEY FEATURES

- ◆ Interactive site map with landmark details
- ◆ Augmented reality 3D models of landmarks
- ◆ Arabic and English narratives with audio and video
- ◆ Digital badges for completed visits

TEAM

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Renad Hazzaa Al-Masabi
Hala Emad Abras

Reem Saleh Al-Masabi
Shahad Mohammed Al-Haj

SUPERVISOR

Dr. Aisha Mashraqi

SERVES

Visitors to archaeological
and heritage sites

12

Female Campus
Second Semester

07

FamShop Assistant

Family allergy and budget shopping assistant

A web platform that checks scanned grocery products against each family member's allergies and spending limits.

Grocery shopping is harder for families who manage food allergies, dietary restrictions and a fixed budget. Ingredient labels are small, technical or in a foreign language, which is a particular obstacle for elderly and low-literacy shoppers. The team found that existing apps cover only parts of the problem and do not combine health needs with budget control.

The team built FamShop Assistant as a responsive web application using HTML, CSS, JavaScript, Bootstrap, PHP and MySQL. Each family member has a profile holding allergies and daily, weekly or monthly budgets. When a shopper scans a barcode, the system retrieves product data from the Open Food Facts API or a local product table, flags allergens, compares the price with the active member's budget and suggests alternatives. The platform also offers a cart, support tickets and an admin dashboard. The report records functional test cases, such as login and budget update, as passing.

BUILT WITH

HTML5

CSS3

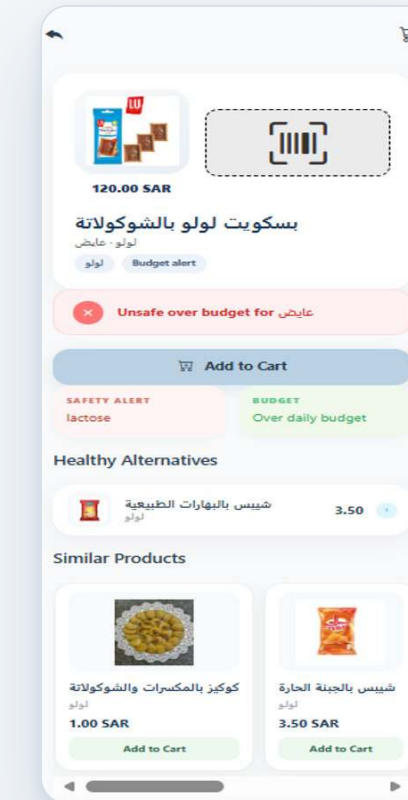
JavaScript

Bootstrap

PHP

MySQL

Open Food Facts API



Product result with allergen alert, budget status and alternatives

KEY FEATURES

- ◆ Barcode scan with allergen alerts per member
- ◆ Daily, weekly and monthly budget tracking
- ◆ Shopping cart and scan history
- ◆ Admin dashboard for products, users and support

TEAM

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Nawa Dabbash Rajab

Lama Hamad Al Mehthel
Taif Hady Almansour

SUPERVISOR

Dr. Mohammed Hamdi

SERVES

Families managing
allergies and budgets

13

Female Campus
Second Semester

08

GradPro

Graduation project management system

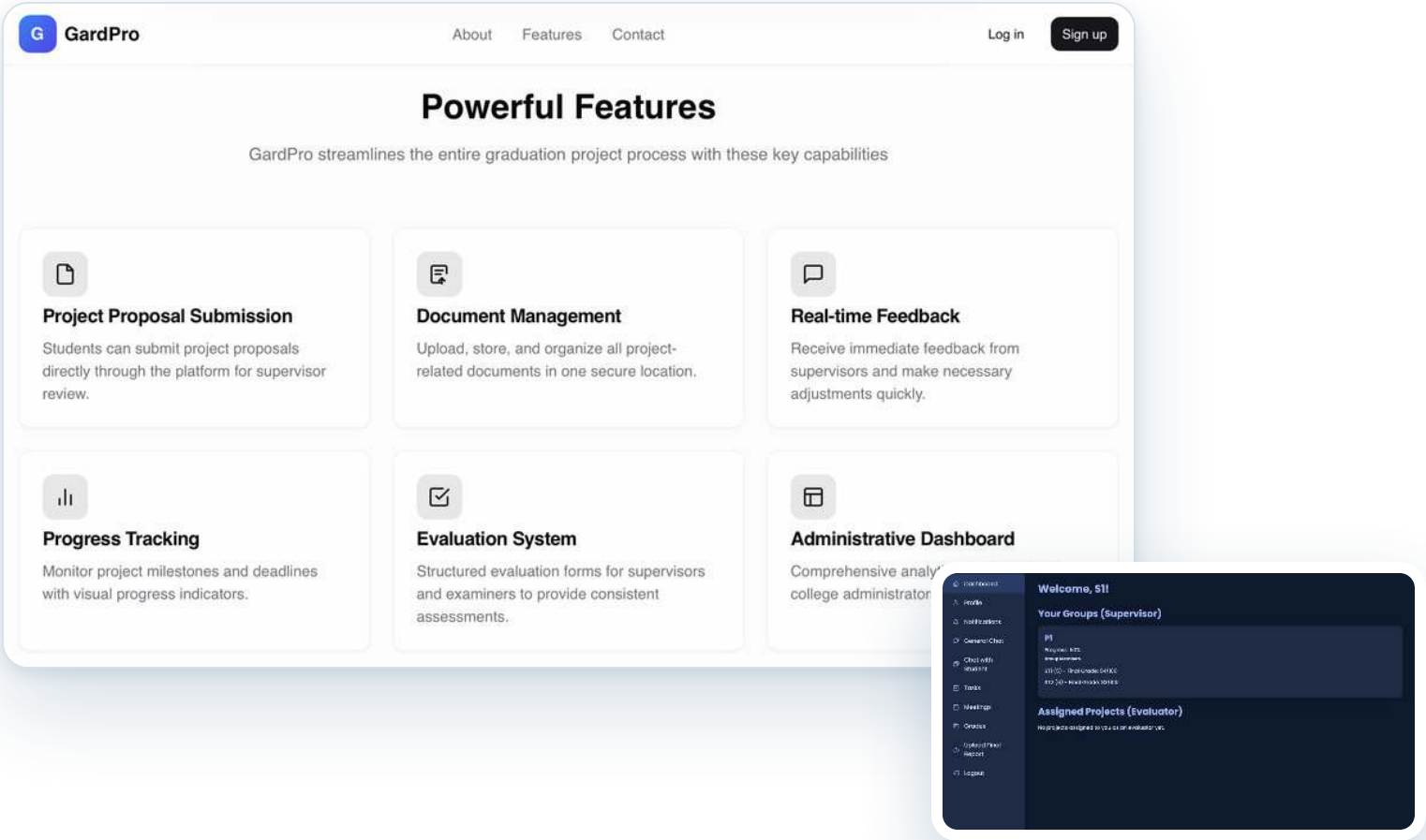
One web platform for the communication, documents, progress tracking and evaluation of graduation projects.

Graduation projects at Najran University had no unified management platform. Students and supervisors relied on email and free file storage, so communication was scattered, supervisors could not monitor progress in one place, documents were lost or hard to recover, and students received little formal feedback. The team surveyed faculty members and students with Google Forms to confirm these needs.

The team built GradPro, a web system in PHP with a MySQL database and role-based access for students, supervisors, examiners and administrators. Features include project dashboards with milestone tracking, document storage with version control, messaging between students and supervisors, an automated meeting scheduler, and a dual evaluation module for supervisors and examiners. Security includes two-factor authentication by email through PHPMailer and managed sessions. The report presents the implemented interfaces and a post-implementation survey of students and supervisors.

BUILT WITH

- PHP
- MySQL
- PHPMailer
- JavaScript
- CSS3



- 1 Landing page listing GradPro’s key capabilities
- 2 Supervisor dashboard with group progress and navigation menu

KEY FEATURES

- ◆ Role-based access with two-factor authentication
- ◆ Project dashboards, milestones and document versioning
- ◆ Meeting scheduler and chat with supervisors
- ◆ Supervisor and examiner evaluation module

TEAM

Mjd Aldyn Rashd
Abdulaziz Husain Alnajrani

Faisal Ahmad Al Swar

SUPERVISOR

Dr. Bakri Alawaji

SERVES

Najran University students,
supervisors and examiners

14

Male Campus
First Semester

09

Hejin Race Management Application (HRMA)

Camel race management app for Najran

An Arabic Android app that lets organizers, camel owners and administrators run camel races in Najran digitally.

Camel (Hejin) racing is a traditional sport in the Arabian Peninsula, and Najran is a notable location for it. Race registration there is paper-based, organizers' communication about procedures and schedules is unclear, and no single digital store keeps race results or participants' history. Organizers find it hard to host several races, verify documents and approve participants.

The team built an Arabic-language Android app in Java with a PHP and MySQL back end, connected through Volley requests. Administrators manage organizers, camel owners, categories and races. Organizers create and close races, approve or reject participation requests, and assign ranks and prize amounts. Camel owners, called Mudammirs, register camels, join races and view results. The team reports completing the interface, back-end code and database, and testing the login and account-creation validation messages.

BUILT WITH

Java

Android Studio

PHP

MySQL

Volley

TEAM

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Mana Mohsen Ali Al Suwaidan

Rakan Ali Saleh Al Jelaidan

SUPERVISOR

Dr. Sultan Alamer

SERVES

Najran camel race organizers
and camel owners

15

Male Campus
First Semester



Organizer control panel with race and participation actions

KEY FEATURES

- ◆ Role-based dashboards for admins, organizers and owners
- ◆ Race creation, scheduling and closing
- ◆ Approval of race participation requests
- ◆ Winner ranks and prize assignment

10

Hirfatna

حرفتنا

Najran traditional handicrafts platform

An Arabic web platform where Najran artisans present their crafts, list products for order and run workshops for visitors and cultural enthusiasts.

Najran’s traditional handicrafts carry the region’s cultural identity, yet artisans have little online visibility, limited access to wider markets and no specialized platform for reaching buyers directly, while younger generations show less interest in the crafts.

The team built Hirfatna, an Arabic web platform in HTML, CSS and JavaScript, with separate functions for visitors, registered users, artisans and administrators: artisan profiles, product listings with a cart and order requests, workshop registration, cultural articles and an admin panel for moderation. Firebase handles sign-in and data storage and Cloudinary hosts images; payments and delivery tracking remain placeholders. The team surveyed 208 respondents and ran 15 test cases, all reported as passed.

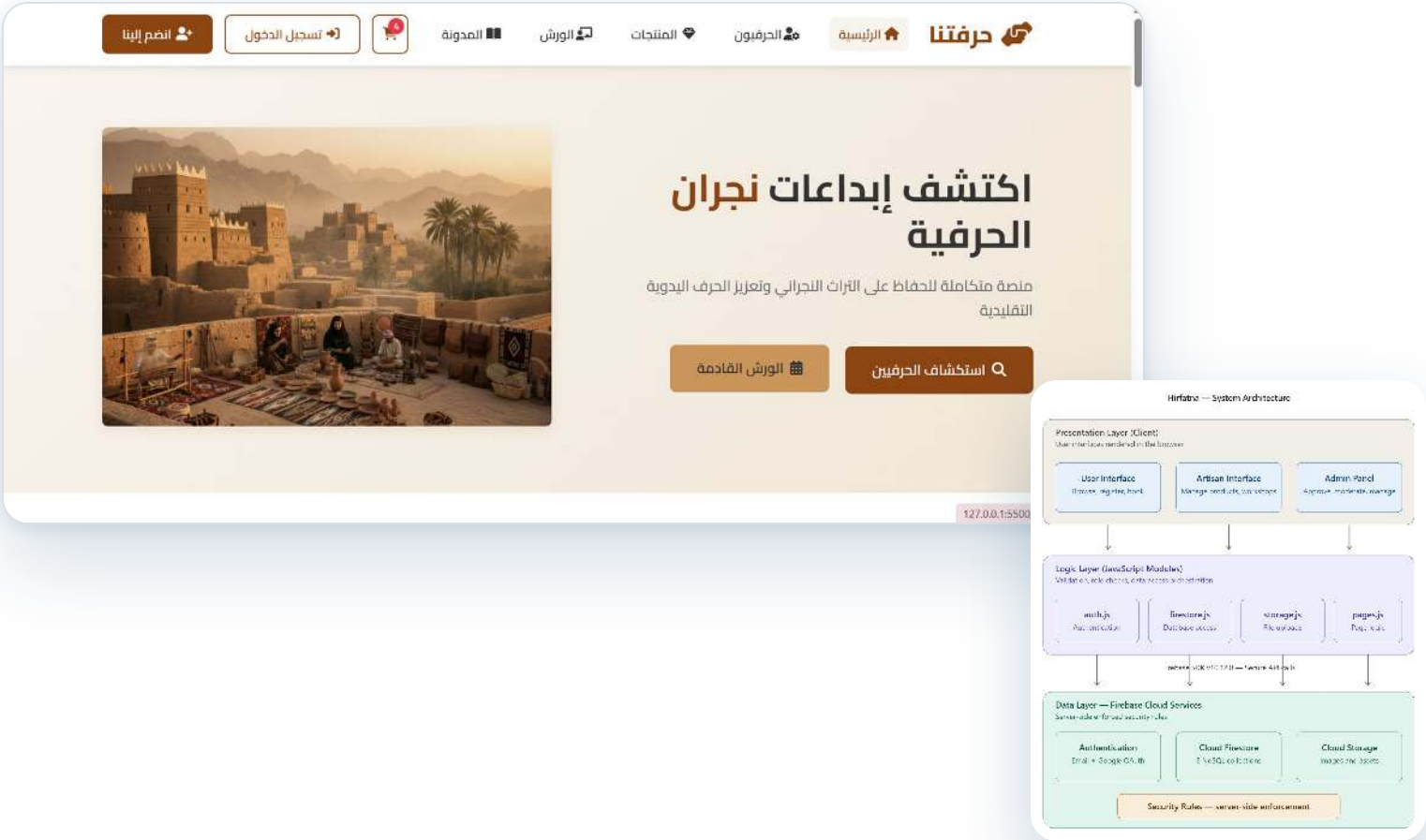
BUILT WITH

- HTML5
- CSS3
- JavaScript
- Firebase Authentication
- Cloud Firestore
- Cloudinary
- GitHub

TEAM

Refah Rashed Mohammed Al Dhawi
Sarah Mohammed Sager Hatwah
Shuaa Abdulrahman Al Yami

Randa Abdulhadi Mohsen Al Mansour
Ghala Mohammed Hamad Al Mansour



- 1 Hirfatna home page with navigation and hero section
- 2 Three-layer system architecture: client, JavaScript modules, Firebase services

KEY FEATURES

- ◆ Artisan profiles with portfolios
- ◆ Product catalog with cart and order requests
- ◆ Workshop scheduling and registration
- ◆ Cultural articles and admin moderation

SUPERVISOR

Dr. Abdullah Mari Alqahtani

SERVES

Najran artisans and
cultural enthusiasts

16

Female Campus
Second Semester

11

Ishara

إشارة

Arabic Sign Language learning platform

An AI-assisted platform that teaches Arabic Sign Language letters and common words with webcam gesture recognition and per-finger corrections.

Learning Arabic Sign Language usually depends on instructors or physical classes, which are costly and limited by location. Existing online tools tend to be static dictionaries or pre-recorded videos, with little interaction and no personal feedback, so learners cannot tell whether they perform a sign correctly.

The team built Ishara as three cooperating services: a React and Electron client, a Node.js and Express server with a PostgreSQL database accessed through Prisma, and a Python FastAPI service running two YOLO models. Learners follow lessons for the 28 Arabic letters and common words, practice in front of a webcam, and take quizzes graded on the server. The AI service detects 21 hand keypoints, compares them with reference poses, and returns finger-by-finger advice in Arabic and English. The team reports an average keypoint confidence of 0.957 across the 28 signs.

BUILT WITH

React

Electron

Node.js

Express

Prisma

PostgreSQL

FastAPI

YOLO

TEAM

Riyadh Nasib Al-Buhayri

Amer Sahmi Al-Maliki

Nasser Abdulhadi Al-Yami

Abdulrahman Mohammed Al-Harhi

Ali Atran Al-Kalfout

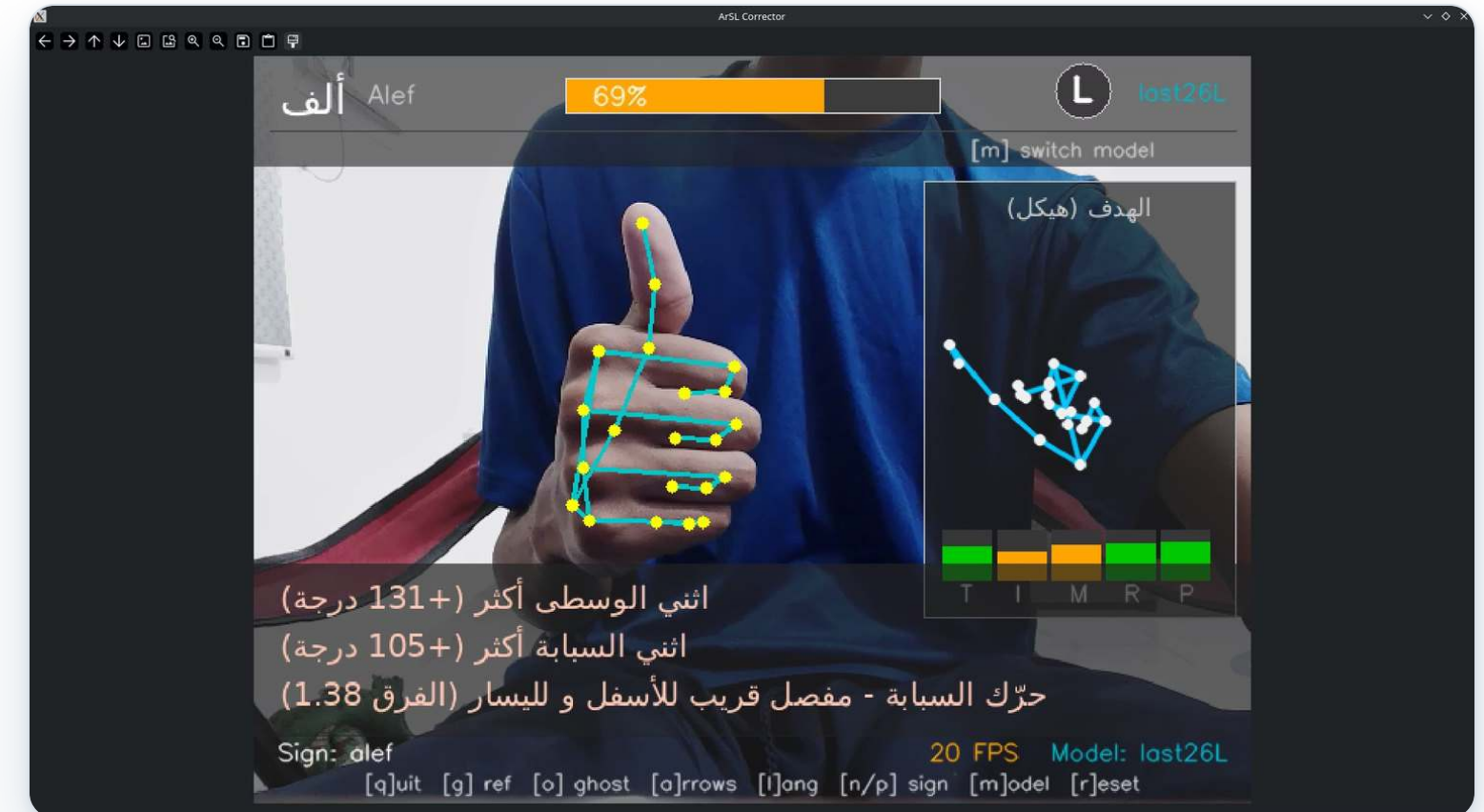
SUPERVISOR

Dr. Mohammed Hamdi

SERVES

Learners of Arabic Sign Language

17

Male Campus
Second Semester

Gesture correction screen with hand keypoints, score and Arabic finger advice

KEY FEATURES

- ◆ Lessons for 28 Arabic letters and common words
- ◆ Real-time webcam gesture recognition
- ◆ Per-finger corrections in Arabic and English
- ◆ Server-graded quizzes with progress tracking

12

Leaf AI

Plant identification and care web platform

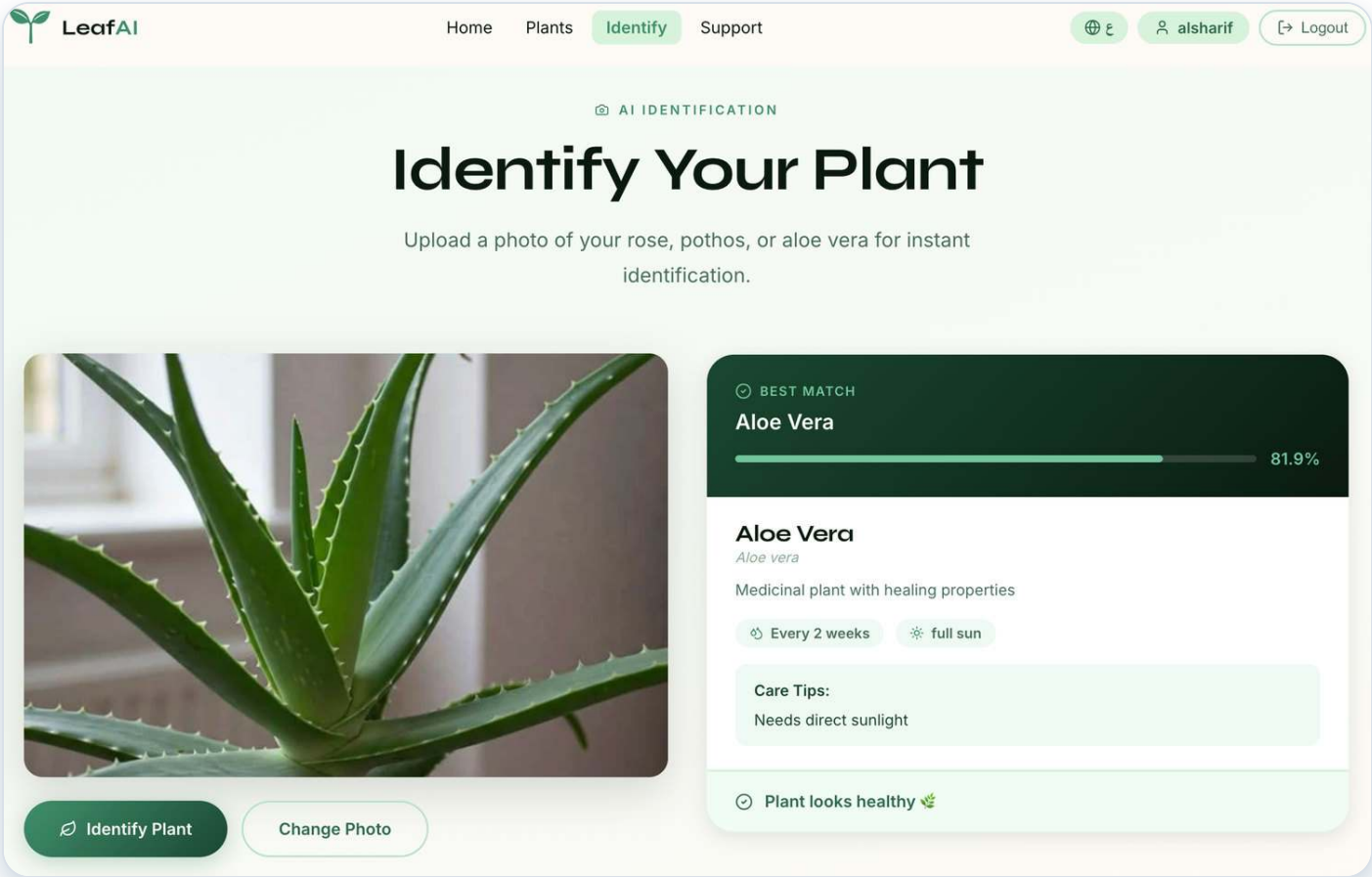
A bilingual web platform that identifies plant species from uploaded photos and gives care guidance to gardeners, farmers and plant enthusiasts.

Identifying a plant species and knowing how to care for it is hard for non-specialists, because classical methods such as taxonomic keys need expert knowledge. The team surveyed 151 people to understand what gardeners and plant enthusiasts expect from a plant-identification tool, and used the answers to prioritize features.

The team built Leaf AI, a web platform with an Arabic and English interface. Users upload a leaf or plant photo, and a MobileNetV2 convolutional neural network trained with transfer learning returns the species, a confidence score and care details. Pages cover plant search, disease information, favorites and identification history, backed by a MySQL database with eight tables. The report states 95% accuracy on the team’s validation set.

BUILT WITH

- Python
- MobileNetV2
- OpenCV
- MySQL
- HTML/CSS
- JavaScript



Identification result for an aloe vera photo with care tips

KEY FEATURES

- Plant identification from uploaded photos
- Care guidance on watering, soil and sunlight
- Plant search, favorites and identification history
- Arabic and English interface

TEAM

Alia Manaa Al Hishlan
Nourah Hadi Al Saleem
Sarah Salman AlHarbi

Fatimah Rabeallah Alsharif
Rimas Hadi Al Sulai

SUPERVISOR

Dr. Hajar Hameed Addeen

SERVES

Gardeners, farmers
and plant enthusiasts

18

Female Campus
Second Semester

13

Nasmaak

Counseling app for student mental wellbeing

A mental health counseling app design that gives university students discreet access to counselors, mood tracking and stress-management content.

University students face academic, social and financial pressure that can lead to stress, anxiety and depression. Cultural stigma, limited awareness and restricted access to psychological support keep many from seeking help. A survey of more than 110 university students and a case study of the Labayh app showed interest in digital support.

The team designed Nasmaak, a mobile-first counseling app for university students, as a requirements and design study. Its planned features include an academic stress tracker, daily mood check-ins, in-app booking with certified counselors, moderated anonymous peer circles, a bilingual Arabic and English interface, and educational content. The report specifies functional and non-functional requirements, role-based access for students, counselors and administrators, and entity-relationship, use case, class, activity and sequence diagrams. It compares Nasmaak with four existing mental health apps; no implementation or testing is reported.

13

Health & Wellbeing

الصحة والرفاه

KEY FEATURES

- ◆ Academic stress tracker and mood check-ins
- ◆ In-app session booking with counselors
- ◆ Moderated anonymous peer support circles
- ◆ Arabic and English interface

TEAM

Zafran Marzog
Asmaa Alshahrani

Hamda Balharith
Sharifa Asiri

SUPERVISOR

Dr. Naif Almudawi

SERVES

University students

19

Female Campus
First Semester

14

Park&Fly Najran

Airport parking reservation website

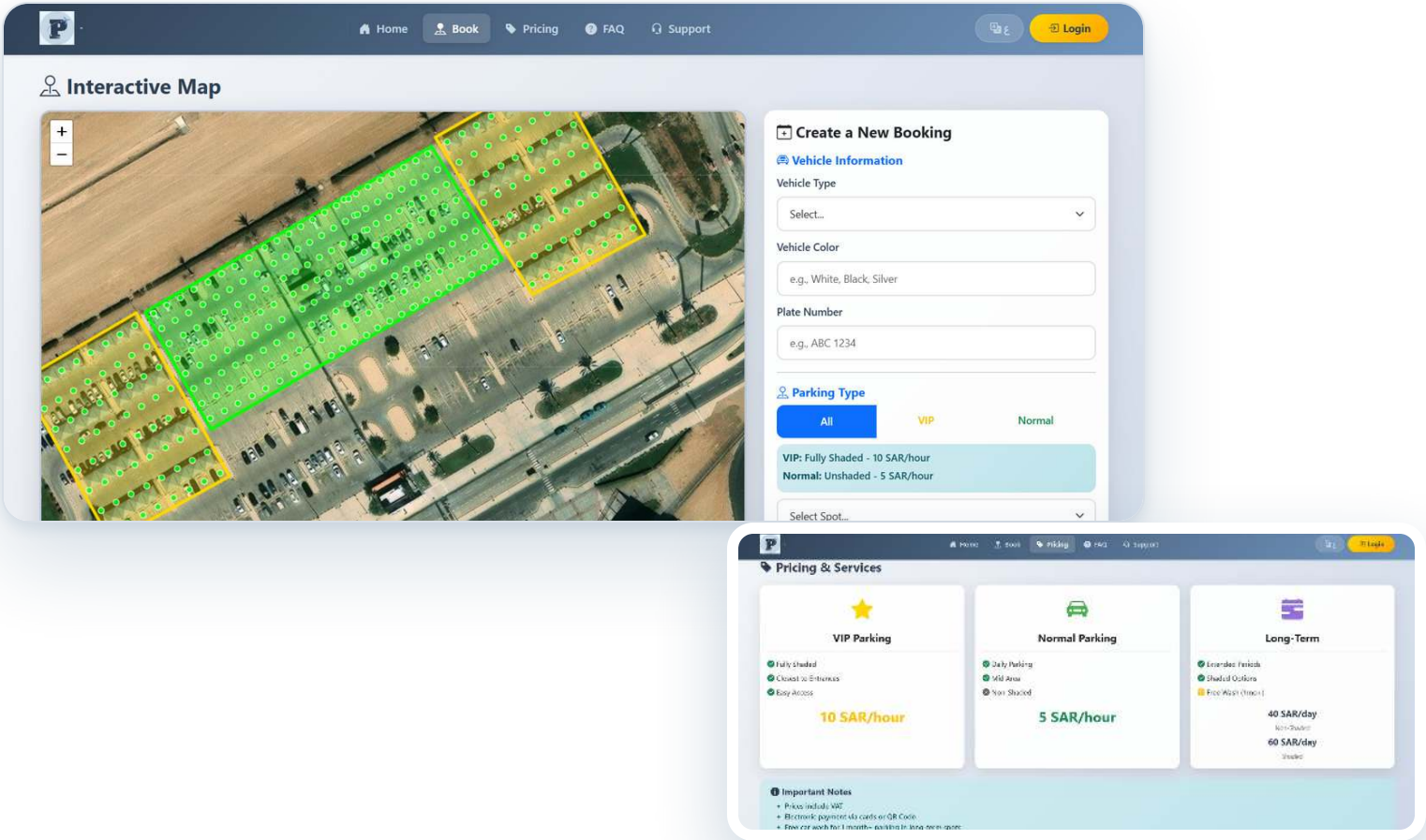
A bilingual website that lets travelers reserve and pay for a specific parking spot at Najran Airport before they arrive.

Travelers at Najran Airport often struggle to find a parking spot, especially at peak times, and the airport has no official website for reserving a space or checking availability. The team reviewed existing parking services in Saudi Arabia and ran a public survey. Their report finds that few of these services target airports, none serves Najran Airport, and most do not let users choose an exact spot.

The team built Park&Fly Najran, a bilingual Arabic and English website written in PHP and HTML with Bootstrap 5 and a MySQL database. Users register, pick a spot on an interactive Leaflet map, choose a short or long booking and pay by card. The site then issues a QR code, which is scanned at the gate to receive a remote control for the spot barrier. Notifications, cancellation and an admin dashboard are included. The report documents unit, integration and interface tests with screenshots.

BUILT WITH

- PHP
- MySQL
- HTML5
- Bootstrap 5
- JavaScript
- Leaflet.js



- Interactive parking map with booking form
- Pricing page listing VIP, normal and long-term parking

KEY FEATURES

- Spot selection on an interactive map
- Card payment and QR code access
- Arabic and English interface
- Admin dashboard for reservations

TEAM

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Amjad Mohammed Al Zrei
Shouf Yassir Bin Jamil

SUPERVISOR

Dr. Aisha Mashraqi

SERVES

Najran Airport travelers

20

Female Campus
First Semester

15

Pure View

Dual-rating platform for movies and TV shows

A web platform that pairs an AI-predicted rating with a viewer rating and offers family content filters for films and series.

Viewers face a very large catalog of films and series, and new titles often have too few user ratings to guide a choice. Parents also need to know what a title contains, because broad age labels do not describe sensitive content. The team surveyed potential users, and 46% of respondents named age-appropriateness as their biggest challenge when choosing content.

The team built Pure View with a React and Vite front end, a Node.js and Express back end, and a SQLite database accessed through Sequelize. Each title carries two scores: an AI rating, predicted from pre-release metadata by a HistGradientBoostingRegressor model trained on the TMDB 5000 dataset, and a user rating accumulated from viewers. Family filters score titles on sensitive categories such as horror, violence and adult content. The report concludes that the AI rating gives a new title a baseline score as soon as an administrator adds it.

BUILT WITH

React

Vite

Node.js

Express

SQLite

Sequelize

Python

scikit-learn

TEAM

Mada Zamel Al-Wadaei
Lana Hussein Al-Jali

Asrar Hameed Al-Absi
Taif Masoud Al-Manjam

Abeer Hassan Al-Wadaei

SUPERVISOR

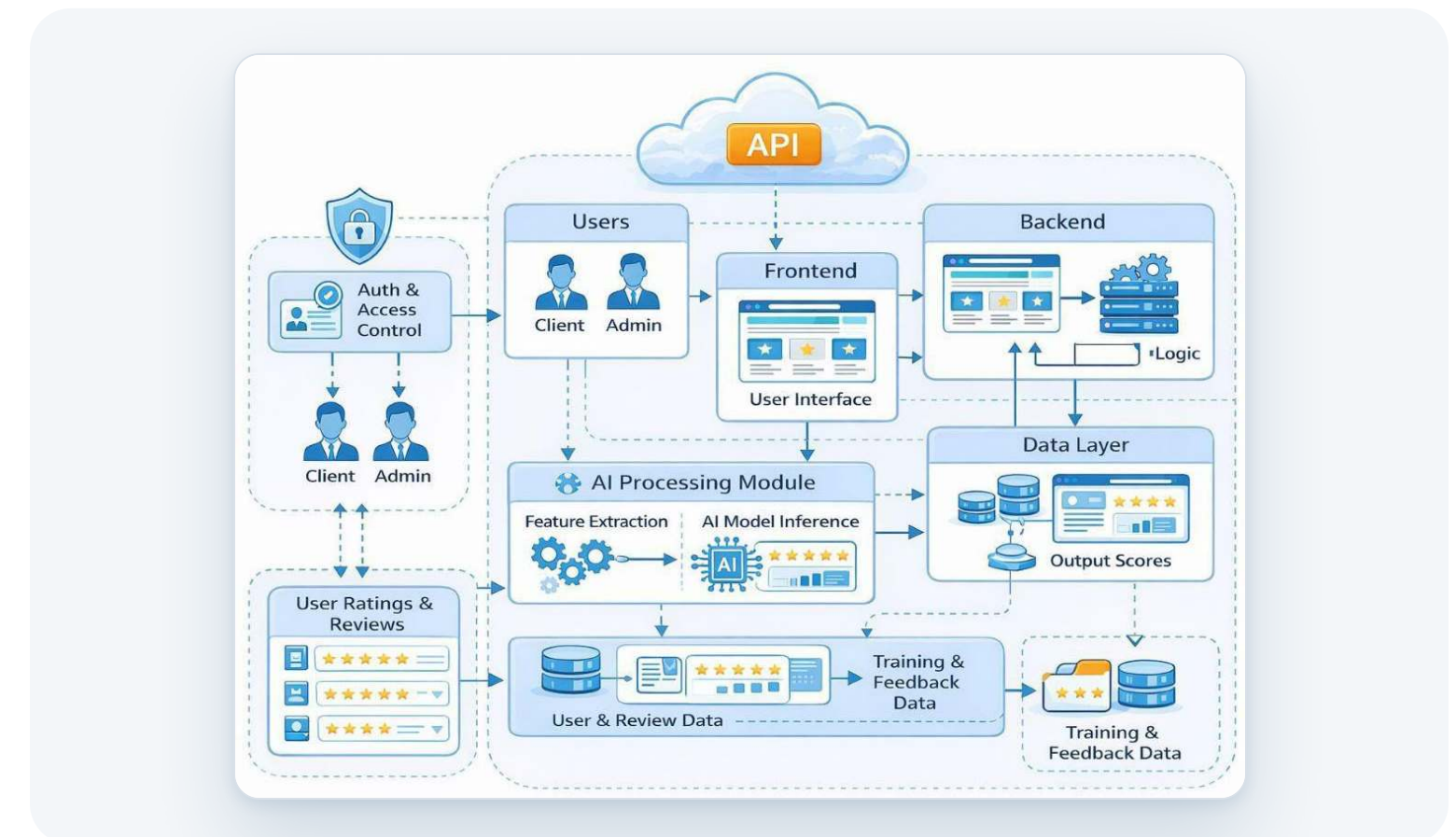
Dr. Sultan Alyami

SERVES

Viewers and families
choosing movies and series

21

Female Campus
Second Semester



System architecture: front end, back end, AI processing module and data layer

KEY FEATURES

- ◆ AI rating predicted for new titles
- ◆ Accumulated user ratings from viewers
- ◆ Family filters for sensitive content
- ◆ Role-based access separating clients and admins

16

Saudi Travel Mate (STM)

Smart tourism recommendation platform

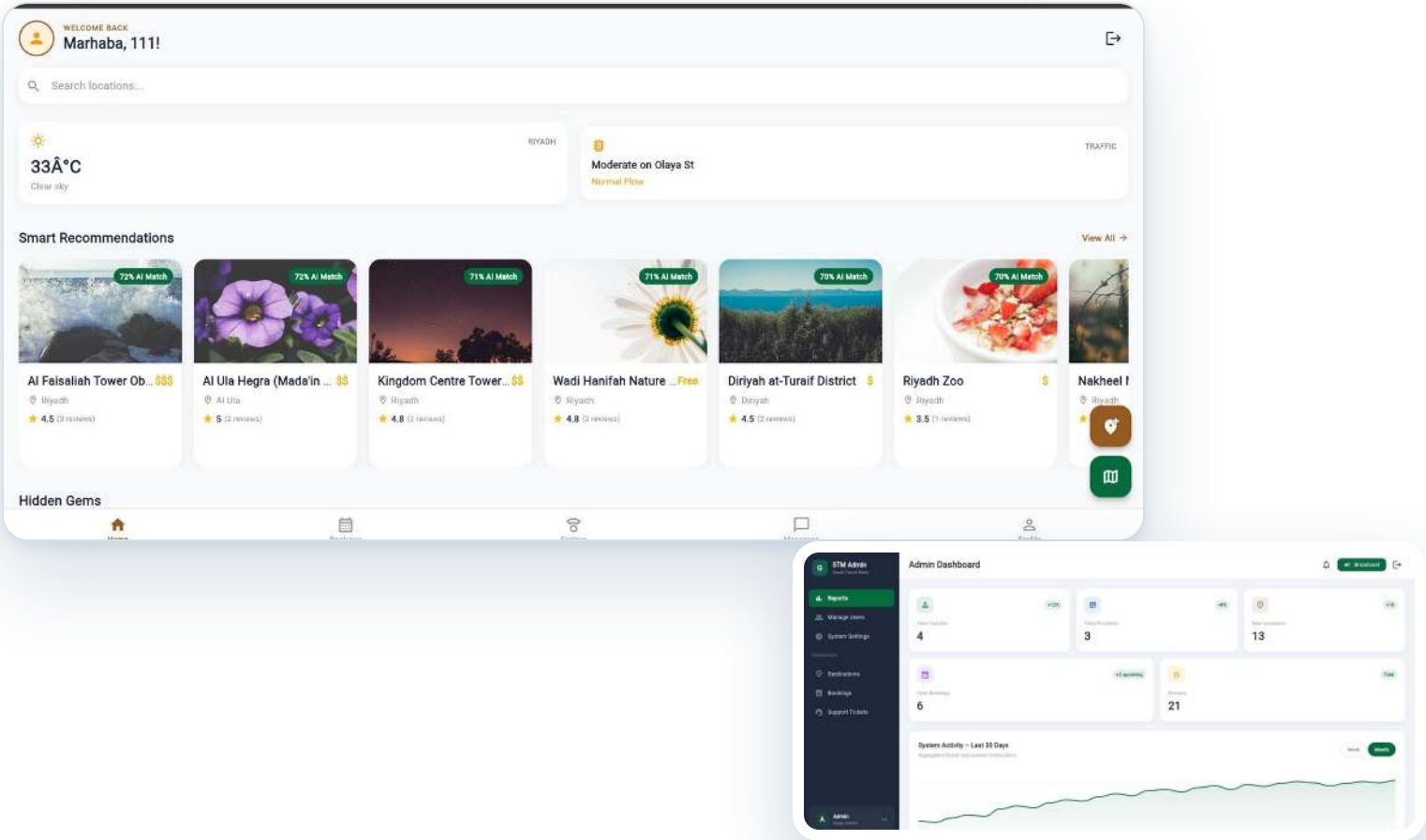
A tourism platform that recommends Saudi destinations to tourists from interests, budget and time, with tools for providers and administrators.

Tourism in Saudi Arabia is growing, but visitors plan trips from scattered sources such as general websites, social media and personal tips. Information is fragmented, it is hard to match places to interests, budget and available time, and many local attractions stay little known.

The team built Saudi Travel Mate, a recommendation-based tour guide with separate interfaces for tourists, service providers and administrators. After registering, tourists see destination cards with an AI match percentage, ratings and prices, alongside weather and traffic information. They can search and filter destinations, read reviews, book or pin places, track upcoming and canceled trips, and exchange messages. Providers add new locations. Administrators use a dashboard to manage users, destinations and bookings and to send broadcast announcements. The implementation chapter documents these working screens.

BUILT WITH

- Flutter
- Dart
- FastAPI
- SQLAlchemy
- PyJWT



- 1 Home screen with smart recommendations, weather and traffic
- 2 Admin dashboard with usage statistics and broadcast option

KEY FEATURES

- ◆ Destination recommendations with AI match percentages
- ◆ Search, filters, reviews and trip bookings
- ◆ Provider tools for adding locations
- ◆ Admin dashboard with user and booking management

TEAM

Salman Al-Qahtani
Saeed Sari

Mushabbab Al-Sharyah
Mohammed Hussein

Abdulaziz Mohammed

SUPERVISOR

Dr. Naif Almudawi

SERVES

Tourists and local service providers in Saudi Arabia

22

Male Campus
Second Semester

17

SHMS: Student Housing Management System

Web platform for female student housing

A web platform that moves female student housing at Najran University from paper to role-based digital services.

Housing for female students at Najran University relied on paper-based, manual registration. The team identified delays in check-in and check-out, inaccurate records, slow communication with students and guardians, and no central record of violations or of service requests such as study rooms and transportation.

The team built a web system with PHP and MySQL, using HTML, CSS, JavaScript and Bootstrap for the interface and XAMPP as the local server. Students, parents, supervisors and administrators each get a separate dashboard with role-based access. The system handles room booking, travel permit requests, attendance tracking, complaints and maintenance, notifications, and approval of payment receipts. NFC and QR check-in appear in the report as a proposed component. The final slides describe the system as fully implemented, and the conclusion states that it meets the project's objectives.

BUILT WITH

PHP

MySQL

HTML

CSS

JavaScript

Bootstrap

XAMPP

TEAM

Rdinah Abdulrahman M Algshnin

Sara Abdooalrahmman Ah Mmdal Zahrany

Shejoon Sultan Jemaan Alyami

Ensherah Hassan Khuzaee

Safiah Omar Ali Fath

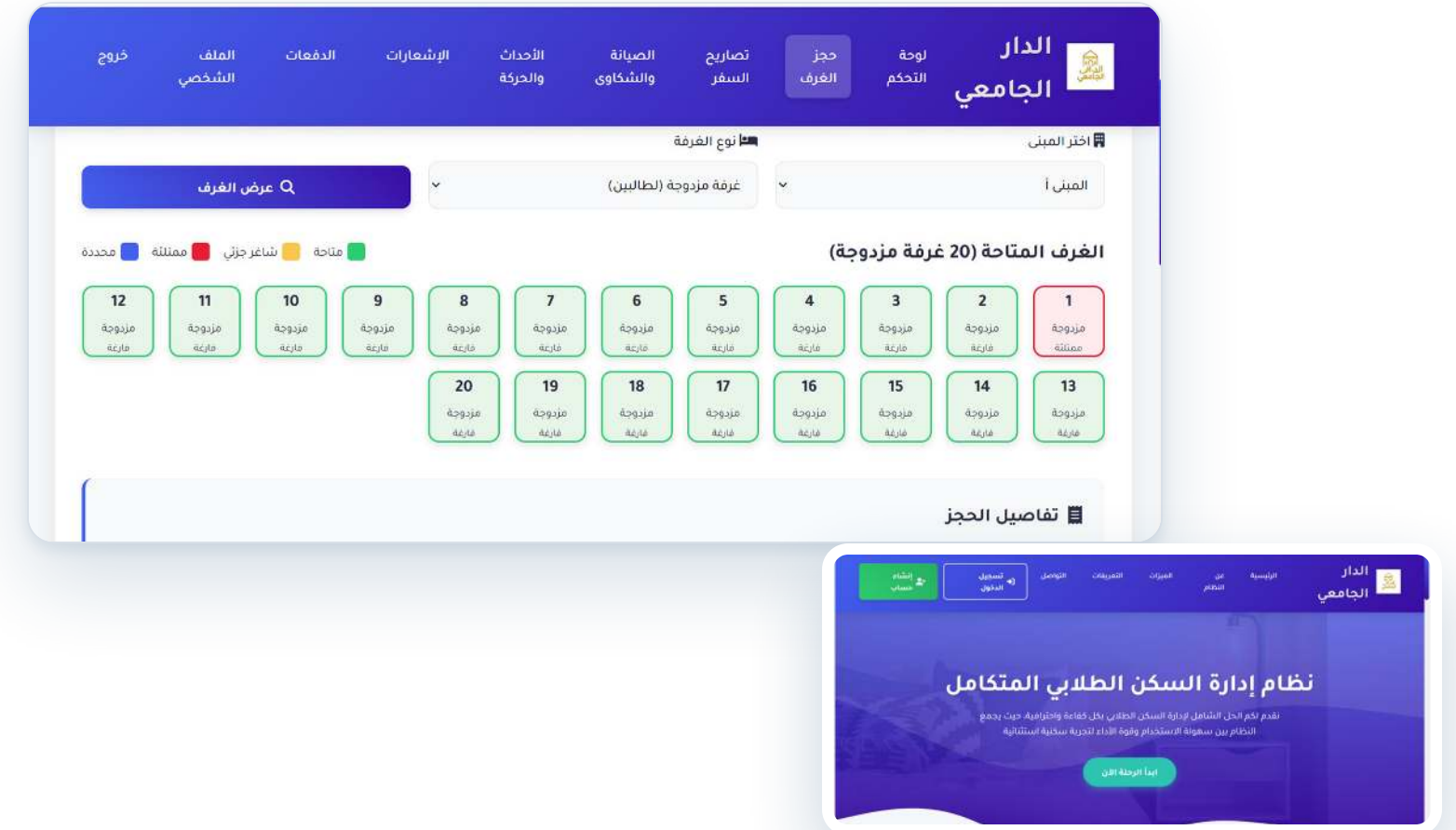
SUPERVISOR

Dr. Hanan Halawani

SERVES

Female students in
Najran University housing

23

Female Campus
First Semester

- 1 Room booking screen showing available double rooms by building
- 2 Arabic home page of the housing management system

KEY FEATURES

- ◆ Room booking with building and room-type selection
- ◆ Travel permit requests reviewed by supervisors
- ◆ Attendance tracking and complaint handling
- ◆ Separate dashboards for students, parents, supervisors and admins

18

Smart Classroom Prototype

Classroom information display, QR attendance and feedback

A web prototype that gives university classrooms an information display, dynamic QR code attendance and anonymous session feedback.

Many university classrooms still depend on manual roll calls, scattered announcements and feedback that arrives too late to change teaching. These gaps cost class time and leave students, instructors and administrators without timely, reliable data.

The team built a three-tier web prototype as the first building block of a smart college system. A smart information display shows schedules and announcements, a dynamic QR code on the classroom projector lets students check in and classifies them as attended, late or absent, and an anonymous feedback form collects input after each session. The system uses TypeScript, Node.js, Express, React, Vite, Tailwind CSS, PostgreSQL and Prisma, with simulated Najran University data in place of live Edugate links. The report states that all 144 automated tests passed: 21 unit, 96 integration and 27 end-to-end.

BUILT WITH

TypeScript

Node.js

Express

React

Vite

Tailwind CSS

PostgreSQL

Prisma

TEAM

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Aseel Khayran Dabbash Rajab
Muaath Ahmad Ismail Alharoub

SUPERVISOR

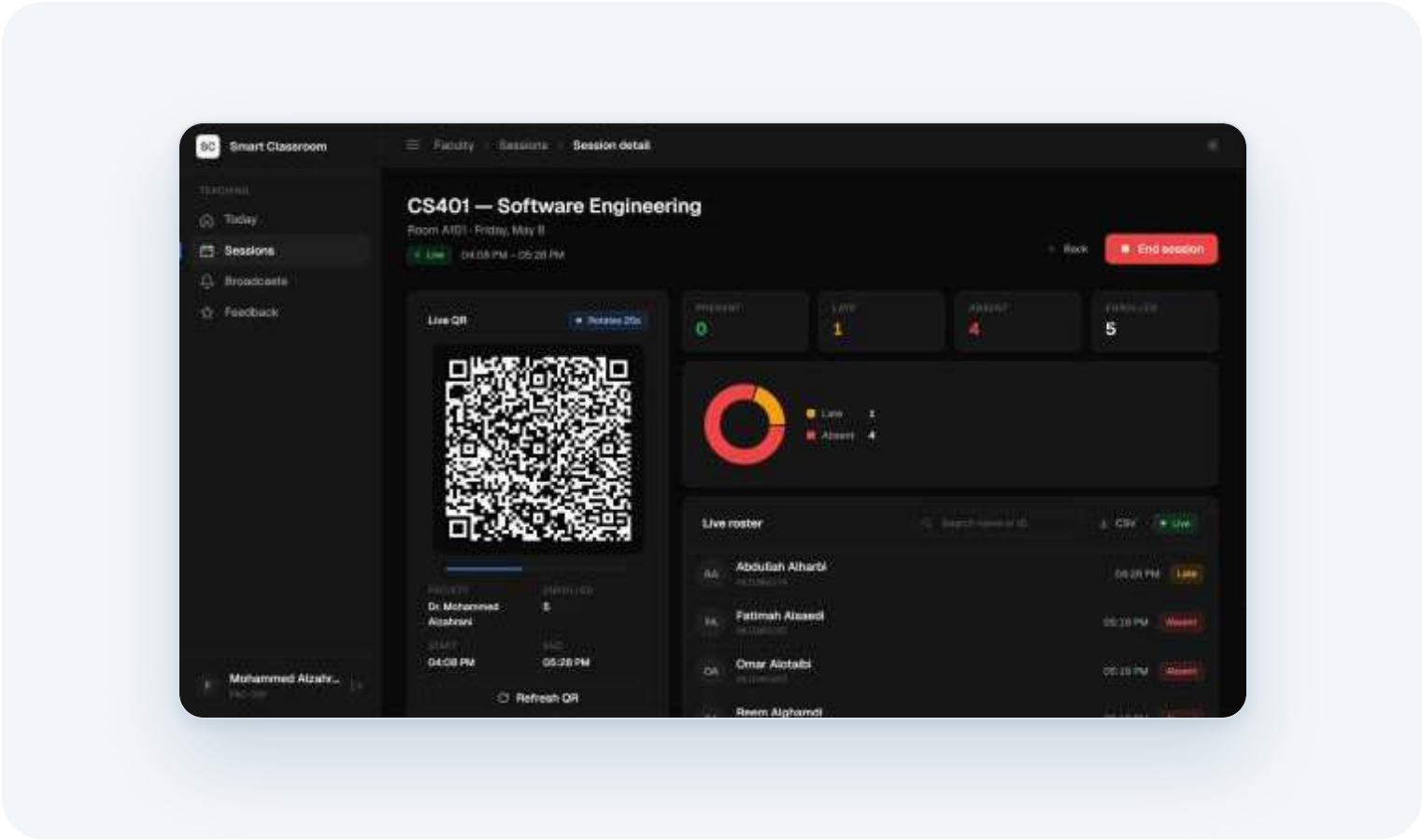
Dr. Muhammad Akram Alam

SERVES

Students, instructors and administrators of university classrooms

24

Male Campus
Second Semester



Instructor’s live session page with the rotating QR code and attendance roster

KEY FEATURES

- Smart display of schedules and announcements
- Dynamic QR code attendance check-in
- Attended, late or absent classification
- Anonymous session-based student feedback

19

Smart Parking System Using Cameras and AI

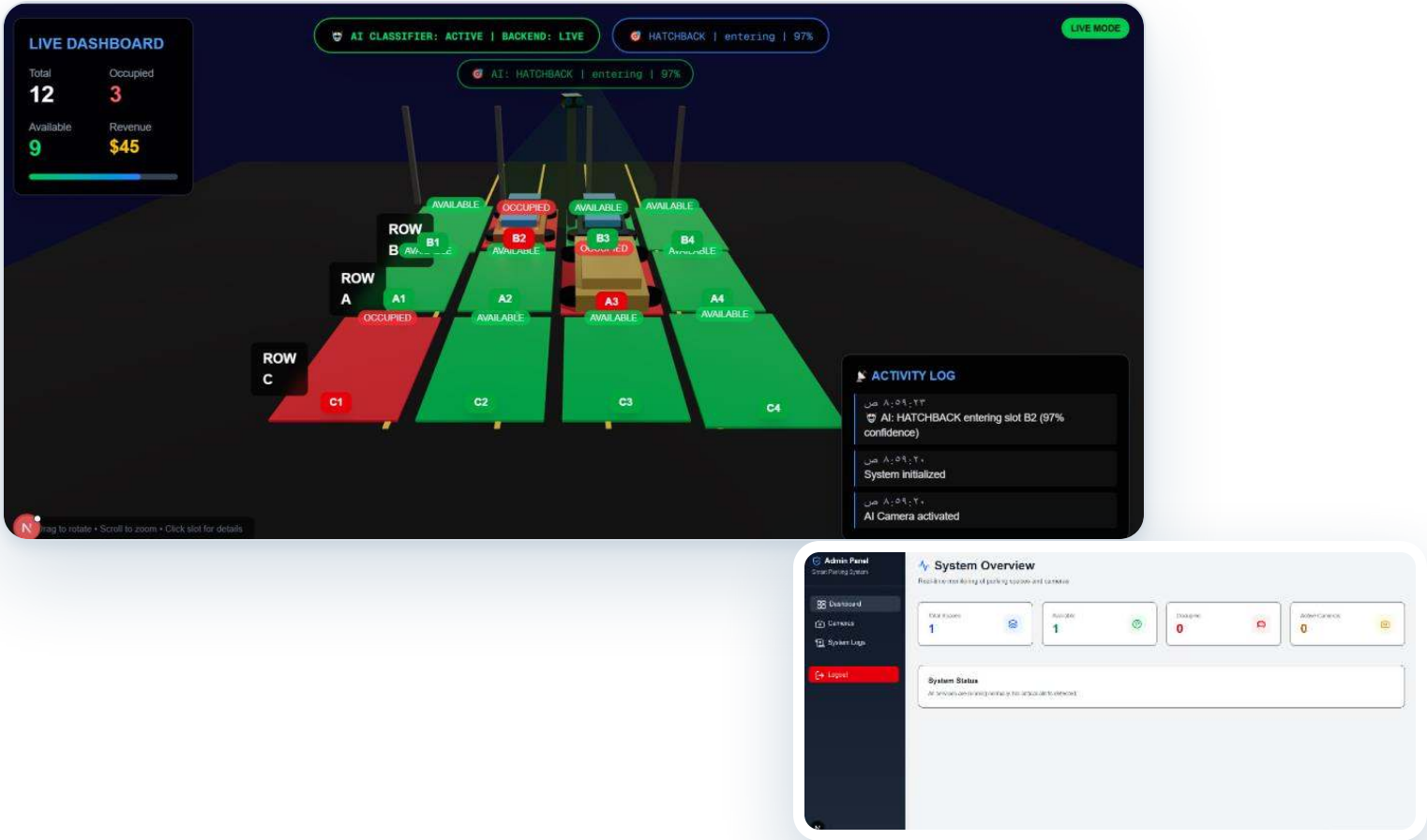
A camera-based system that detects occupied and vacant parking spaces with computer vision and shows live availability to drivers and administrators.

Public parking lots, including those at universities and malls, rarely tell drivers where a space is free, so drivers circle and waste time and fuel. Sensor-based systems exist, but they need costly installation and maintenance and are hard to extend to larger areas.

The team built a camera-based alternative. A Python module using a YOLO object-detection model and OpenCV finds vehicles in camera images and matches them to predefined parking spaces. A Laravel back end stores the results in MySQL, and a Next.js and Tailwind CSS front end shows drivers live availability and gives administrators a dashboard for cameras and system logs. A 3D simulator page demonstrates the detection. The report states 96% detection accuracy on the team’s test images and an average system response time of 2.7 seconds.

BUILT WITH

- Python
- YOLO
- OpenCV
- Next.js
- Tailwind CSS
- Laravel
- MySQL



- 3D parking simulator marking slots as occupied or available
- Administrator panel showing system overview and status

KEY FEATURES

- ◆ Detects occupied and vacant spaces from camera images
- ◆ Live availability view for drivers
- ◆ Administrator dashboard for cameras and logs
- ◆ 3D parking simulator page

TEAM

Hadeel Mansour Hatem Almakrami

Thabiah Saleh Mansuor Almtlq

SUPERVISOR

Dr. Adel Alsulaiman

SERVES

Drivers and parking administrators

25

Female Campus
Second Semester

20

UniReserve

Academic booking system for appointments, rooms and labs

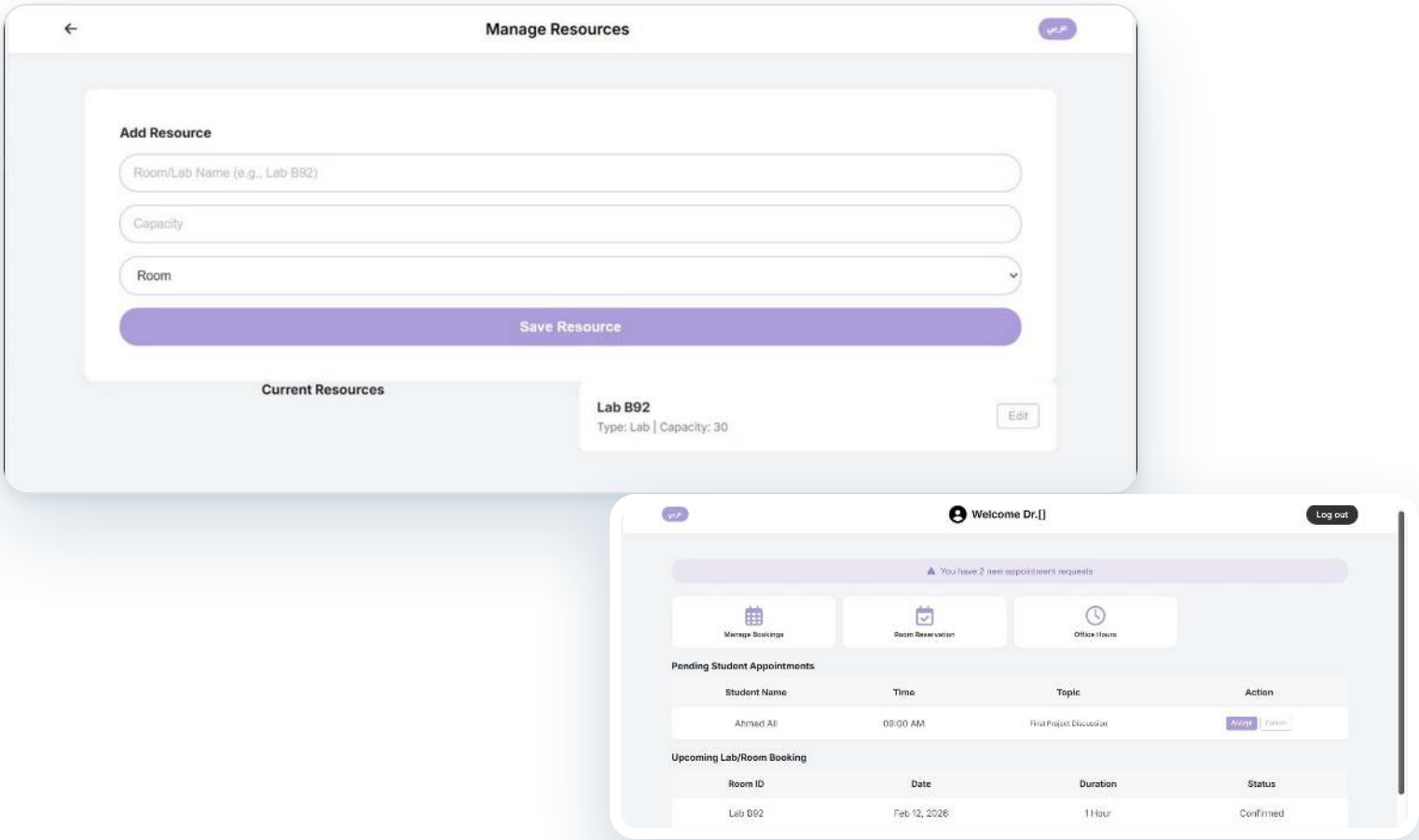
A web system where students book appointments with faculty and faculty reserve classrooms and labs, managed by administrators.

At the College of Computer Science and Information Systems, students arrange meetings with professors, and faculty reserve classrooms and labs, through direct contact or paper-based processes. These methods lead to scheduling conflicts, unclear room availability and wasted time. In the team’s questionnaire, 79% of respondents reported schedule overlaps or double bookings under traditional methods.

The team built UniReserve, a bilingual web system with separate pages for administrators, faculty and students. Students pick a faculty member, choose a time slot and confirm or cancel the appointment. Faculty accept or reject requests, view office hours and reserve rooms and labs after checking availability. Administrators manage reservations, rooms, labs and users. The system uses PHP and MySQL, and the report documents the working interface for each of the three roles.

BUILT WITH

- PHP
- MySQL
- HTML
- CSS
- JavaScript



- 1 Administrator page for adding and editing rooms and labs
- 2 Faculty dashboard with pending appointment requests and room bookings

KEY FEATURES

- ◆ Appointment booking with faculty members
- ◆ Room and lab reservation with availability check
- ◆ Accept or reject requests from a faculty dashboard
- ◆ Administrator control of resources and users

TEAM

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SUPERVISOR

Dr. Naif Almudawi

SERVES

Students, faculty and
administrators of the college

26

Female Campus
Second Semester

Information Systems

نظم المعلومات

31

Projects مشروعات

165

Students طالبًا وطالبة

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Alfanar

Najran University student clubs app

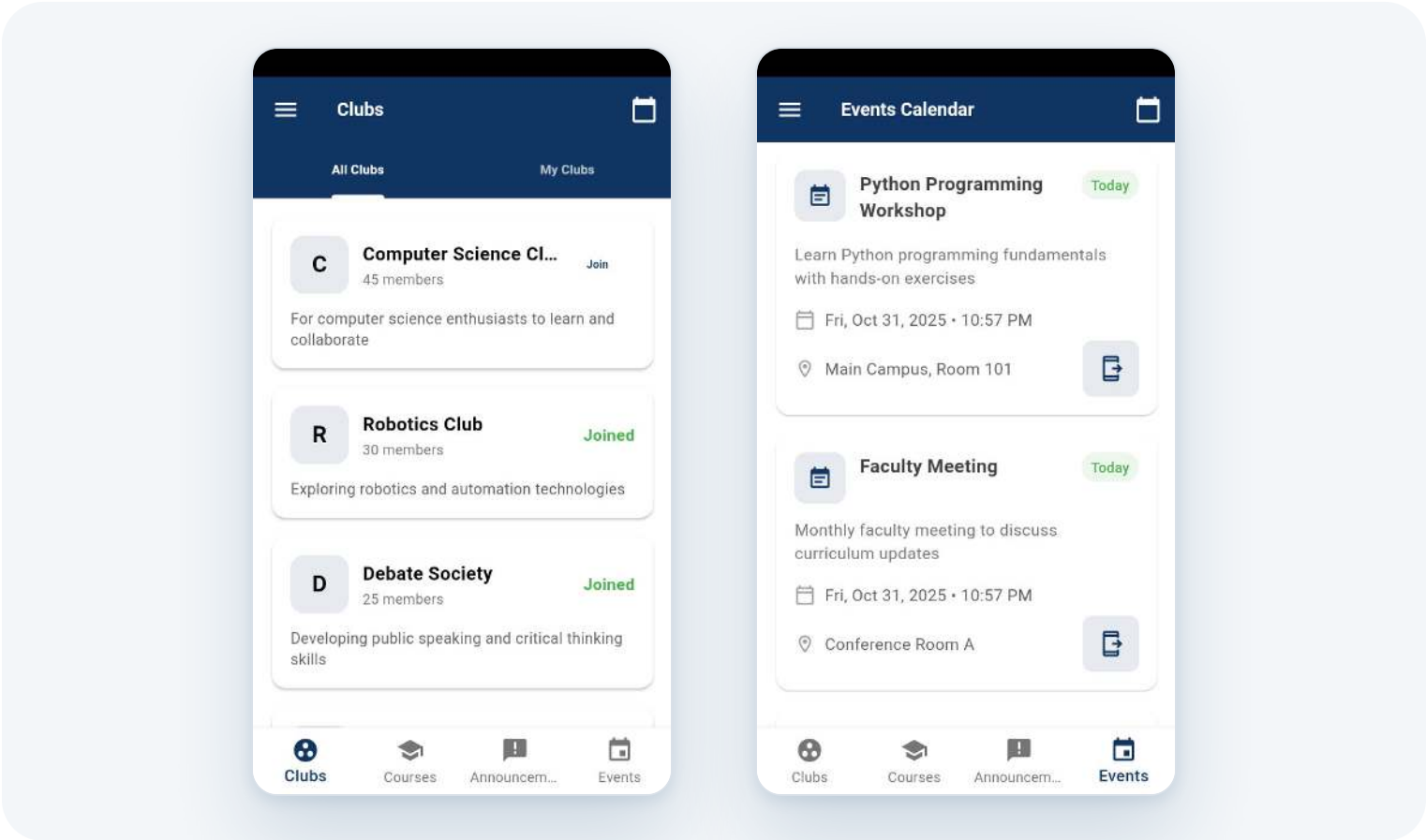
A mobile app that gives Najran University students one place to find clubs, events, courses and announcements.

Student clubs help university students build leadership skills and explore their interests, but the team found that many universities, including Najran University, lack an organized way to manage and promote them. Without a system that clearly presents university activities, student interaction and participation stay limited, particularly among international students who may struggle to find suitable activities.

The team built Alfanar, named after a lighthouse that guides students through campus life, as a mobile app developed with Flutter and Firebase. It brings clubs, events, courses and announcements into one place. Students and faculty browse clubs, events, courses and a calendar, and students request to join clubs. Administrators, faculty and club supervisors manage clubs, courses, announcements, events and users through role-specific screens. The team’s final slides present test cases for joining a club, blocking duplicate registrations, email validation and event visibility.

BUILT WITH

- Flutter
- Firebase
- Visual Studio



- 1 Clubs list with member counts and Join or Joined status
- 2 Events calendar with dates, locations and today markers

KEY FEATURES

- ◆ Browse and join university clubs
- ◆ Events calendar and course listings
- ◆ Announcements from administrators and faculty
- ◆ Role-based management for clubs and users

TEAM

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Fan Yslem Alkorbi
Fatmah Misfr Alamr

Reem Ali Mohamed

SUPERVISOR

Dr. Asmaa Alrayzah

SERVES

Najran University students

22

AMAN AI

Financial fraud message detection for Saudi Arabia

A bilingual web platform that checks suspicious bank messages and sender details for fraud, without requiring a login.

Financial fraud by text message and email is a growing threat in Saudi Arabia, and elderly and non-technical users are especially exposed. Manual checks and static rules struggle with new scam wording. The team surveyed users to shape a tool that checks both a message and the identity of its sender.

The team built AMAN AI, a web platform with Arabic and English interfaces. Users paste a suspicious message, optionally add the sender's phone number or email, and receive a fraud probability without logging in. A React front end calls a FastAPI back end that runs a fine-tuned AraBERT model with rule-based adjustments, checks senders against a PostgreSQL table of trusted Saudi banks, and logs each analysis. Trained on Arabic fraudulent and legitimate email messages plus synthetic data, the model exceeded 95% accuracy, F1-score, precision and recall on the team's test data in the final epoch.

BUILT WITH

React

FastAPI

Python

PostgreSQL

SQLite

PyTorch

Hugging Face

22

Cybersecurity & Privacy

الأمن السيبراني والخصوصية

KEY FEATURES

- ◆ Fraud probability for pasted messages
- ◆ Trusted-sender verification against a bank database
- ◆ Arabic and English interface, no login needed
- ◆ Admin panel for trusted senders and logs

TEAM

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SERVES

General users, especially elderly and non-technical people

29

Male Campus
First Semester

23

CyberShield AI

Intelligent web security scanner

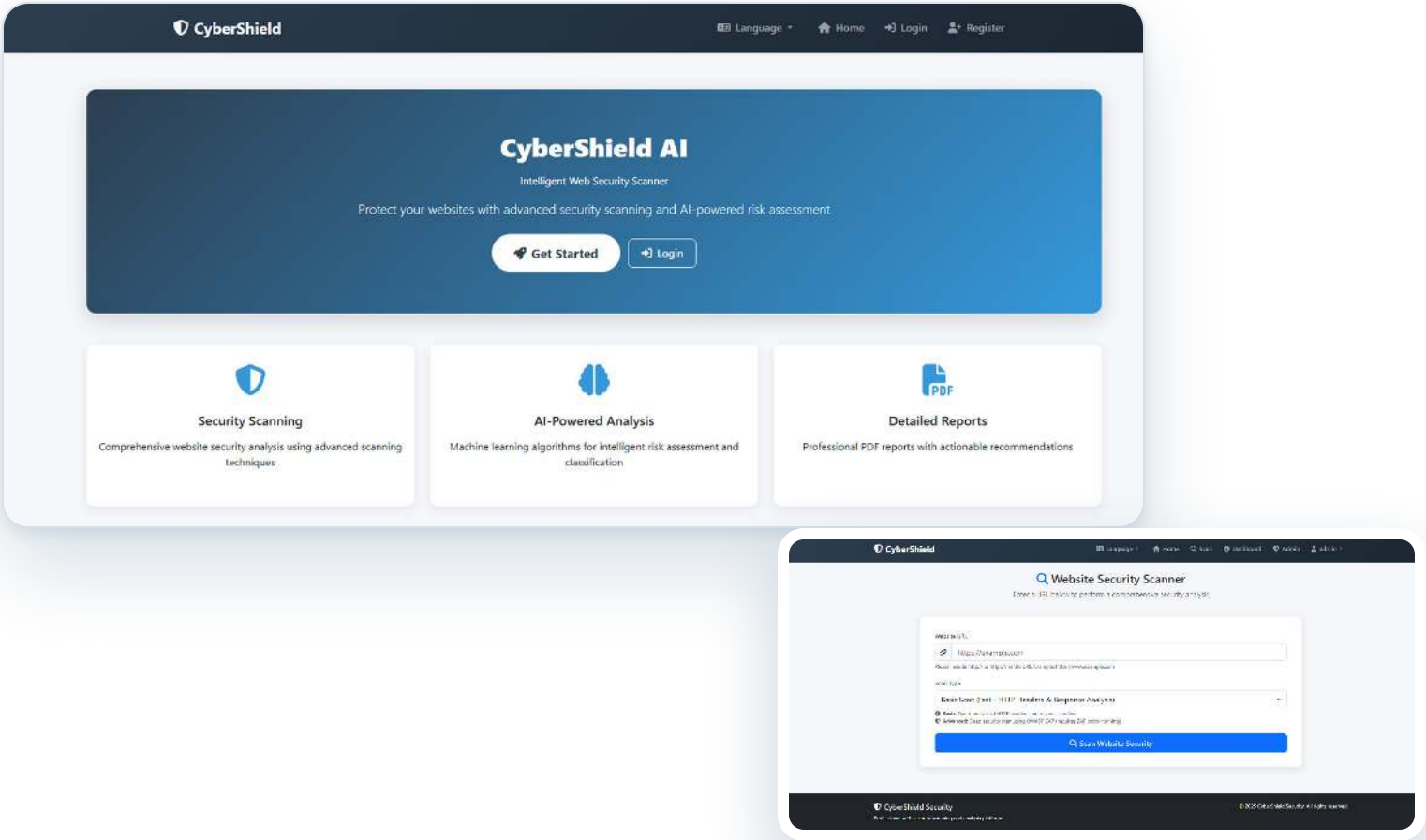
A web application that scans websites for security weaknesses and uses an AI model to explain the findings and recommend fixes.

Websites are exposed to common vulnerabilities such as cross-site scripting (XSS), SQL injection and cross-site request forgery (CSRF), and to missing HTTP security headers. The team aimed its project at small and medium businesses, developers and cybersecurity professionals who need an easy way to scan a site, understand the findings and receive actionable recommendations.

The team built CyberShield AI, a Flask web application written in Python. A user enters a website address. The system checks HTTP security headers and, through an OWASP ZAP integration, runs spider and active scans whose alerts are grouped by severity. An OpenAI model then turns the results into an executive summary, risk assessment and recommendations. Scans are stored in SQLite, the interface works in Arabic and English, user and administrator panels are included, and results export as PDF reports built with ReportLab. The team’s report describes all planned features as implemented over 14 weeks.

BUILT WITH

- Python
- Flask
- OWASP ZAP
- OpenAI API
- SQLite
- ReportLab
- Bootstrap



- 1 CyberShield AI home page with scanning, AI analysis and reports
- 2 Scanner page offering a basic header scan or OWASP ZAP scan

KEY FEATURES

- Security header checks and OWASP ZAP scans
- AI-written risk summary and recommendations
- Arabic and English interface
- PDF reports and stored scan history

TEAM

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Siyad Saleh Al Harith

Mohammed Mahdi Al Omar
Talat Awad Al Omar

SUPERVISOR

Dr. Turki Alelyani

SERVES

Small businesses, developers
and security professionals

30

Male Campus
First Semester

Digital Cultural & Tourism Guide for Saudi Arabia

A bilingual web guide to Saudi regions, cities and landmarks with a preference quiz and trip calendar for tourists.

Tourists planning a trip to Saudi Arabia struggle to find reliable information, organize activities and choose destinations that match their interests. Traditional trip planning is fragmented, takes time and offers little personalization, which can lead to disappointing experiences.

The team built a bilingual Arabic and English web platform on Node.js, with Prisma ORM for database access and HTML, CSS and JavaScript for the interface. Visitors explore an interactive map divided into five regions, search cities and filter results by category such as restaurants, museums, parks and events, and take a preference quiz that produces recommendations. A calendar lets them log activities. An admin dashboard manages user accounts, categories, places, quiz questions and suggested destinations. The final report states that the project achieved its primary objectives.

BUILT WITH

- Node.js
- Prisma
- HTML
- CSS
- JavaScript

TEAM

Raghad Hussain Al-Saad
Shouq Omar Haidarah
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Shahad Yahya Gharzan
Rimas Duayrim Al-Shahrani
Shahad Saleh Al-Harith

SUPERVISOR

Prof. Asadullah Shaikh

SERVES

Domestic and international
tourists in Saudi Arabia



Home page design with landmarks and service sections

KEY FEATURES

- ◆ Interactive map of five Saudi regions
- ◆ Smart city search with tourism categories
- ◆ Preference quiz with personalized recommendations
- ◆ Admin dashboard for content and quizzes

25

EEG-Based Intelligent Robotic Arm Control

Brain-signal controlled robotic hand prototype

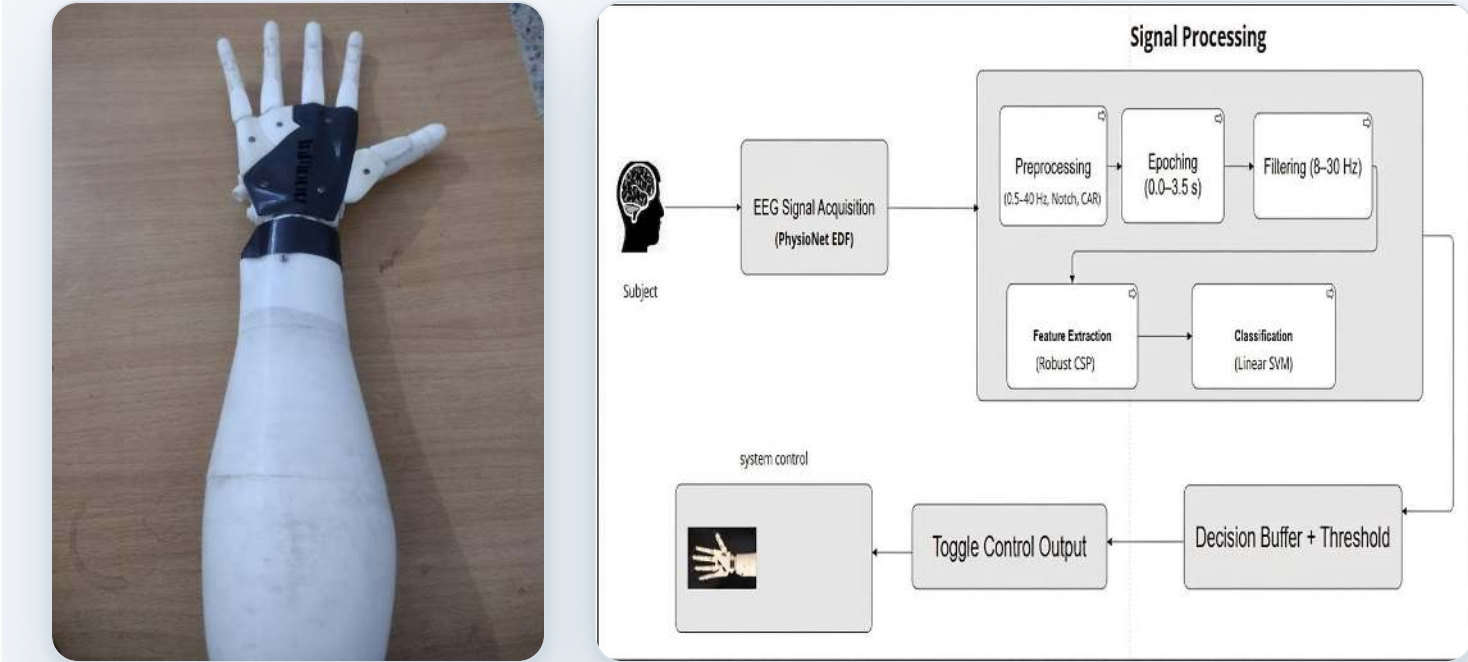
A prototype that reads motor-imagery EEG signals and opens or closes a 3D-printed robotic hand, aimed at people with limited movement.

Brain-computer interfaces let people with motor impairments control external devices through brain activity instead of muscle movement. EEG signals are weak and noisy, however, and they vary widely between users. Classification and signal processing also add delay, which makes real-time control of a robotic arm difficult.

The team built an offline proof of concept in Python. It takes recordings from the PhysioNet EEG Motor Movement/Imagery dataset, keeps 12 sensorimotor channels, filters and segments the signals, extracts features with regularized Common Spatial Patterns, and classifies them with a linear SVM. A confidence-buffered controller turns the predictions into open and close commands, sent over serial to an Arduino Mega that drives servos in a 3D-printed tendon-driven hand. Accuracy averaged 79.69% across six evaluated subjects, with a best subject at 95.65%. The report names high latency as the main limitation.

BUILT WITH

- Python
- MNE
- SciPy
- Arduino Mega 2560
- DS3225 servo motor
- 3D-printed tendon-driven hand



- 1 The team’s 3D-printed tendon-driven robotic hand and forearm
- 2 System architecture from EEG acquisition to robotic hand control

KEY FEATURES

- ◆ Motor-imagery EEG classification with a linear SVM
- ◆ Confidence-buffered open and close hand commands
- ◆ Arduino-driven 3D-printed tendon robotic hand
- ◆ Per-subject accuracy evaluation on PhysioNet data

TEAM

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Ozwah Saleh Alkorbi
Shoog Salam Almuammar

Rand Mohamad Alhamd

SUPERVISOR

Dr. Arwa Mohamed

SERVES

People with motor disabilities

26

GradBase

Najran University graduation projects e-library

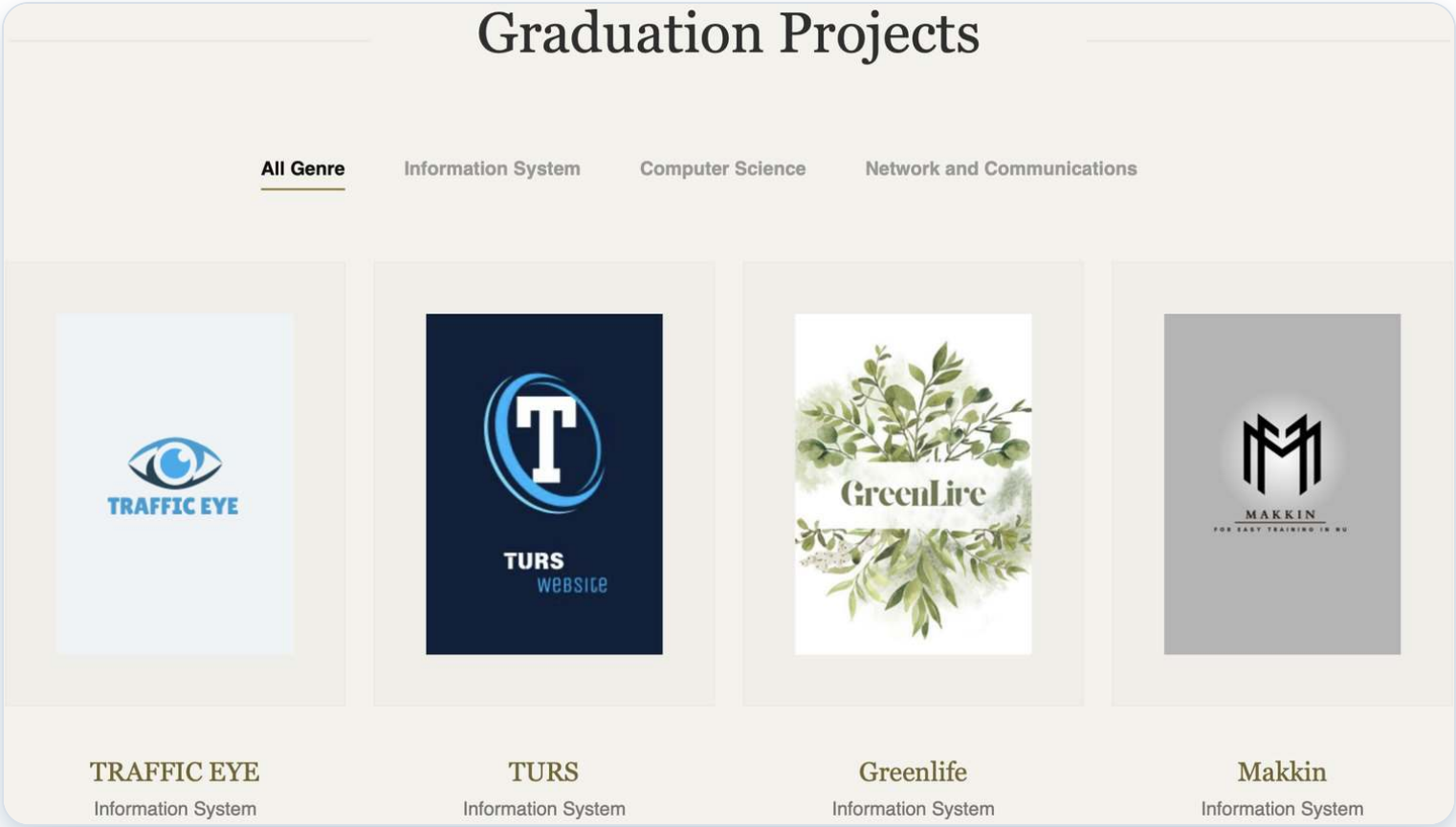
A web library where Najran University students and faculty browse, upload and review graduation projects, with an AI idea assistant.

Students and faculty in the College of Computer Science and Information Systems at Najran University have no organized place to find earlier graduation projects. Without access to past work, students struggle to understand what a graduation project requires, to check whether an idea has already been used, and to build on earlier results.

The team built GradBase, a web library of graduation projects, with HTML, CSS, JavaScript, Bootstrap, PHP, MySQL and Python. Visitors browse and filter projects by department. Registered students and faculty upload projects, an administrator reviews them before publication, and published files open in a viewer with a watermark and read-only restrictions. An assistant for logged-in users, GradBot, suggests project ideas and answers questions in Arabic or English. The report documents 15 test cases covering these pages, all recorded as passed.

BUILT WITH

- HTML5
- CSS3
- JavaScript
- Bootstrap
- PHP
- MySQL
- Python
- PDF.js



Graduation Projects page with department filters and project cards

KEY FEATURES

- ◆ Search and filter projects by department
- ◆ Upload with administrator approval
- ◆ Watermarked read-only project viewer
- ◆ GradBot project idea generator and chat

TEAM

Lora Naaser Al Mehthel
Shuruq Nasser Al Sharafi
Razan Ali Al Harthy

Shmookh Reman Al Yami
Fatimah Ali Al Hatailah
Aryam Mahdi Al Mehthel

SUPERVISOR

Ms. Malak Alsufyani

SERVES

Najran University
students and faculty

33

Female Campus
First Semester

27

Horse and Rider Training Platform (H&RTP)

Equestrian training app for Najran

An Android app that connects riders in Najran with horse trainers and stables and organizes training courses and field sessions.

Horse riding is part of Najran's culture, but equestrian training there is disorganized. Riders rely on personal contacts and word of mouth to find trainers, there is no central way to book sessions, and riders have little access to digital learning material or a community in which to share experience.

The team built an Android app in Java, backed by a MySQL database, with separate control panels for four roles. Administrators manage users. Trainers add and delete training courses. Stable owners register stables and horses. Riders browse trainings, book field training sessions and rate trainings. The report documents the screens for each role and a login test that shows messages when the username or password is missing or invalid. It also reviews similar apps, Ridesum, Equilab and Ride iQ, and notes that they lack local relevance and Arabic support.

BUILT WITH

Android Studio

Java

MySQL

PHP

TEAM

Mohammed Ali Ghazi

Mohammed Ahssan Almakrami

Mahdi Abdullah Alabbas

Salem Ahmed Al Khureem

SUPERVISOR

Dr. Mousa Alalhareth

SERVES

Riders, trainers and
stable owners in Najran

34

Male Campus
First Semester



- 1 Trainer screen for adding a new training course
- 2 Rider control panel with training and booking options

KEY FEATURES

- ◆ Role panels for admin, trainer, rider and stable owner
- ◆ Trainers add and delete training courses
- ◆ Stable owners register stables and horses
- ◆ Riders browse trainings and book field sessions

28

ISHARA

Arabic Sign Language recognition and translation app

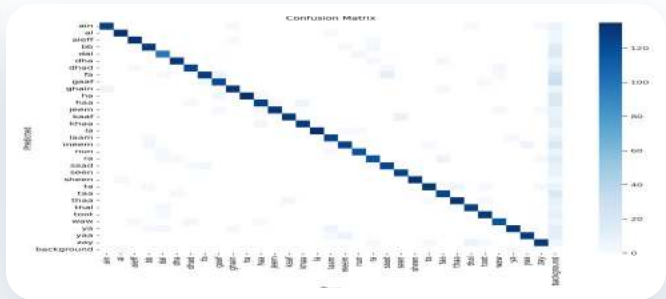
An offline Android app that recognizes Arabic Sign Language letters through the phone camera and shows or speaks them as text.

Deaf and hard-of-hearing people often cannot count on a sign language interpreter being available, and the report points to a shortage of Arabic Sign Language interpreters and of mobile, real-time tools. Many existing recognition systems rely on large deep-learning models that need more computing power than a phone offers, and Arabic datasets are limited.

The team built ISHARA, a Flutter app for Android that reads Arabic Sign Language letters through the phone camera. They trained a YOLOv8 detector in PyTorch on the ArSL21L dataset of 14,202 images covering 32 letter signs, then deployed it on the device with PyTorch Lite so that recognition runs offline. The app assembles recognized letters into Arabic text, can read the text aloud, and keeps a local history. On the team’s validation set, the model reached precision, recall and F1-score of 0.97 and mAP@50 of 0.98.

BUILT WITH

- YOLOv8
- PyTorch
- PyTorch Lite
- ONNX
- Flutter
- Dart
- ArSL21L dataset



- 1 ISHARA home screen with Start Recognition, History and Settings
- 2 Confusion matrix of the final YOLOv8 model across letter classes

KEY FEATURES

- ◆ Live recognition of 32 Arabic sign letters
- ◆ Offline, on-device processing
- ◆ Text output with text-to-speech
- ◆ Local history of past translations

TEAM

Arwa Saad Al-Harith Al-Yami
Rola Hussein Al-Amari
Lama Misfer Manea Al-Wadaei

Eman Salman Mohammed Lsloum
Shahd Ali Al-Shahri

SUPERVISOR

Dr. Arwa Mohamed

SERVES

Deaf and hard-of-hearing people

35

Female Campus
Second Semester

29

Knowledge Bridge

Learning and knowledge-sharing web platform

A web platform where students learn from teachers' courses, ask questions, and get advice from graduates under administrator oversight.

Students often struggle to find reliable study material in one place, to discuss subjects with peers and instructors, and to locate recorded lectures. The team's report names scattered resources and limited interaction as the core problems, and the team surveyed students about what such a platform should offer.

The team built Knowledge Bridge, a web platform for students, teachers, graduates and administrators. Teachers create courses and upload lessons and documents. Students browse courses, view and download lessons, ask and answer questions in a Q&A forum, and comment on and rate content. Graduates share advice, and administrators manage accounts, courses and platform statistics. The system runs on PHP and MySQL under Apache and was developed in Agile sprints. The report states that functional and non-functional testing confirmed the system meets its requirements.

BUILT WITH

PHP

MySQL

Apache

HTML

CSS

TEAM

Ahad Ayed Alshahrani
Ghala Ali Alhayani

Atheer Naji Alyami
Shahd Nashmi Alsheref

Ghadah Yaseen Al-Lajam

SUPERVISOR

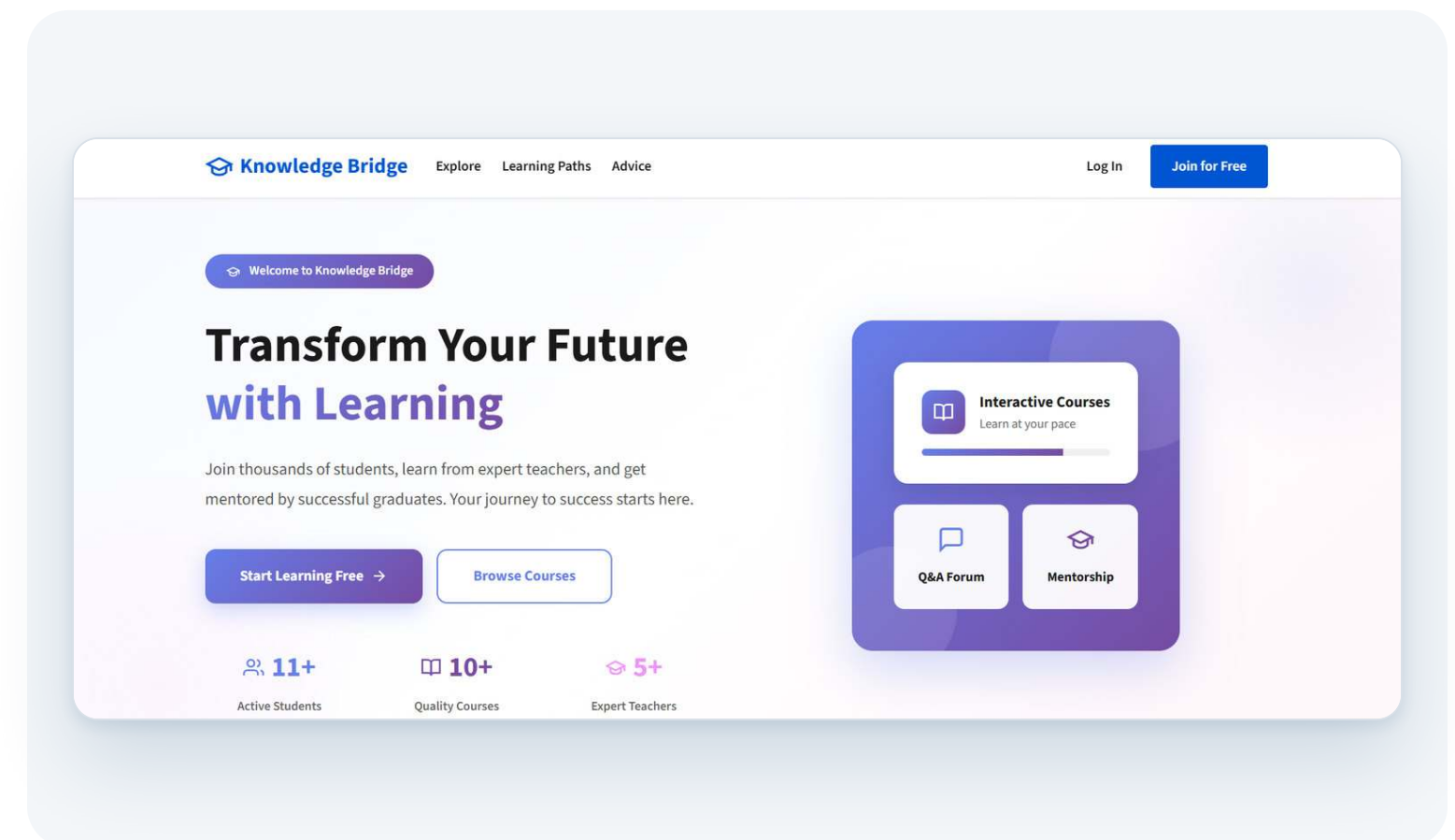
Dr. Mimonah Alqathradly

SERVES

Students, teachers,
graduates and administrators

36

Female Campus
First Semester



Knowledge Bridge home page with course, Q&A and mentorship sections

KEY FEATURES

- ◆ Teacher course and lesson uploads
- ◆ Q&A forum with comments and ratings
- ◆ Graduate advice and mentorship
- ◆ Administrator tools for accounts and statistics

30

MORRID: Mobile App for Water Tank Refills

An ultrasonic tank-level sensor with SMS alerts and a mobile app that connects tank owners with water vendors in Najran.

Water tanks in homes, restaurants, cafes and businesses in Najran can run dry without warning. Owners normally phone water companies or visit them to arrange a refill, which wastes time, and no device warns them when the level drops.

The team built a three-tier prototype. A LILYGO T-A7670G board (ESP32 with an LTE module) and an HC-SR04 ultrasonic sensor measure the water level, drive status LEDs and send SMS alerts. An ASP.NET Core 8 API with SQL Server and Entity Framework Core stores readings and alerts. A Flutter app gives clients, vendors and administrators separate dashboards for tank levels, refill orders and system oversight. In the team's controlled indoor tests, sensor readings showed an average deviation of ± 0.5 cm.

BUILT WITH

ESP32

HC-SR04

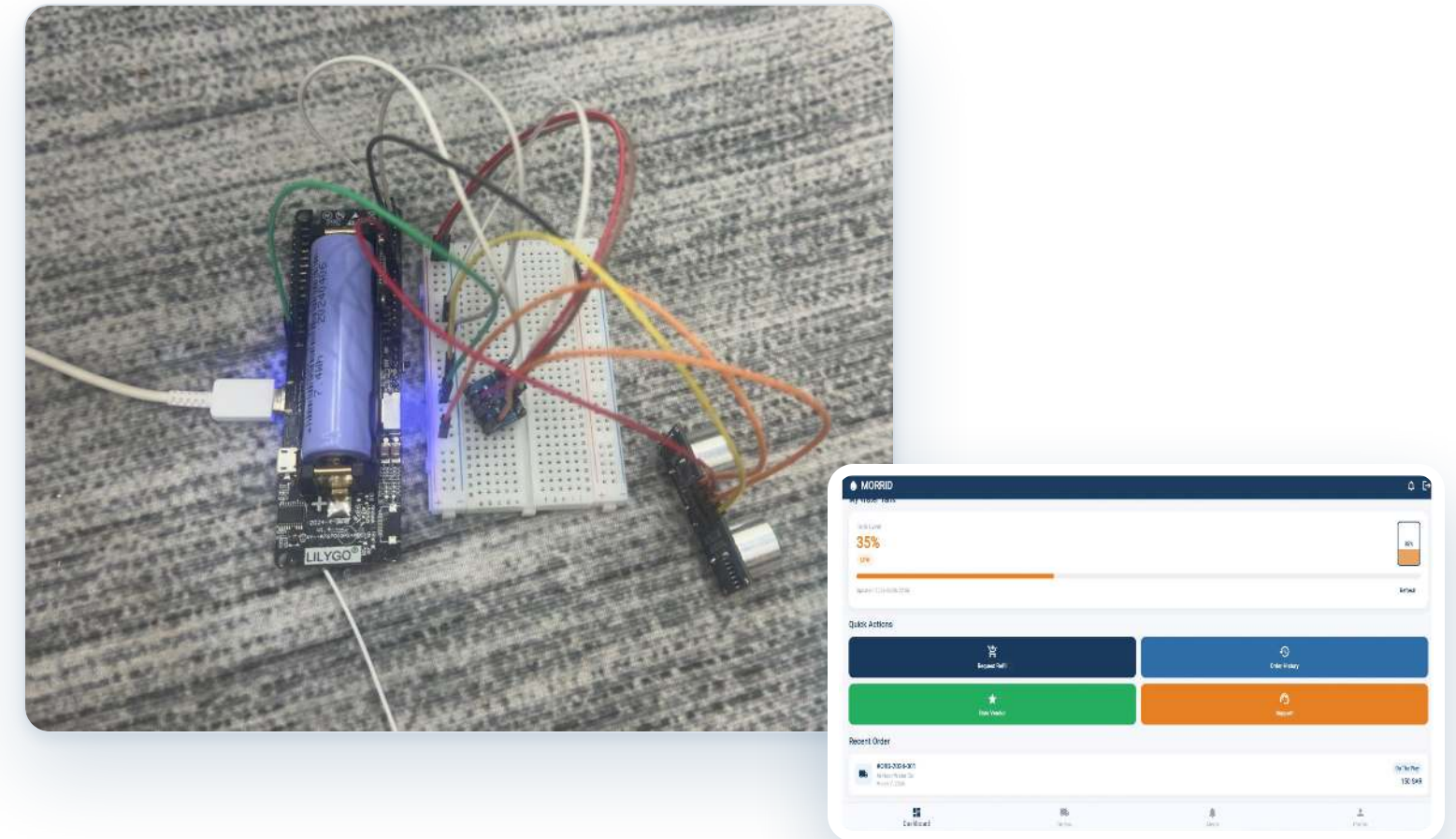
Arduino

ASP.NET Core

SQL Server

Entity Framework Core

Flutter



- 1 Breadboard prototype with LILYGO T-A7670G board and ultrasonic sensor
- 2 Client dashboard showing tank level and refill actions

KEY FEATURES

- ◆ Ultrasonic tank-level sensing with LED status
- ◆ SMS alerts when the water level is critical
- ◆ Refill requests from clients to vendors
- ◆ Separate client, vendor and admin dashboards

TEAM

Sultan Mubarak Salem Alhamami
Abdullah Saleh Mohammed Al Giar
Thamer Abdullah Al Swidah

Abdullah Mohammed Salem Al Shaiban
Muteb Abdullah Al Khaywani

SUPERVISOR

Dr. Mousa Alalhareth

SERVES

Water tank owners
and vendors in Najran

37

Male Campus
Second Semester

31

Najran Smart Auction (NSA)

Mobile auction app with fraud detection

An Android auction app where sellers in Najran list items, bidders place bids, and administrators check auctions for shill bidding.

Auctions remain important to trade in Najran, yet they are still run mostly by hand at physical venues. The report links this manual process to low participation and to a risk of errors and fraud. The team surveyed prospective users and reviewed similar auction apps before designing the system.

The team built Najran Smart Auction, an Android app written in Java with a PHP and MySQL back end. Sellers create auctions with a title, category, start and end times, and bidders browse active auctions and place bids. Administrators view dashboards and manage sellers, bidders and auctions. A Run Fraud Detection function applies four rule-based indicators to an auction's bids: few bidders, one bidder dominating, near-identical bid prices and regularly timed bids. The team tested login and sign-up with black-box tests, and the final slides state that most main screens work and are connected to the database.

BUILT WITH

Java

Android Studio

PHP

MySQL

TEAM

Abdulrahman Hameed Alharbi
Ibrahim Yahya Al Naji

Hamad Sultan Al Obaiyah
Mohammed Abdullah Mohammed Alfaifi

SUPERVISOR

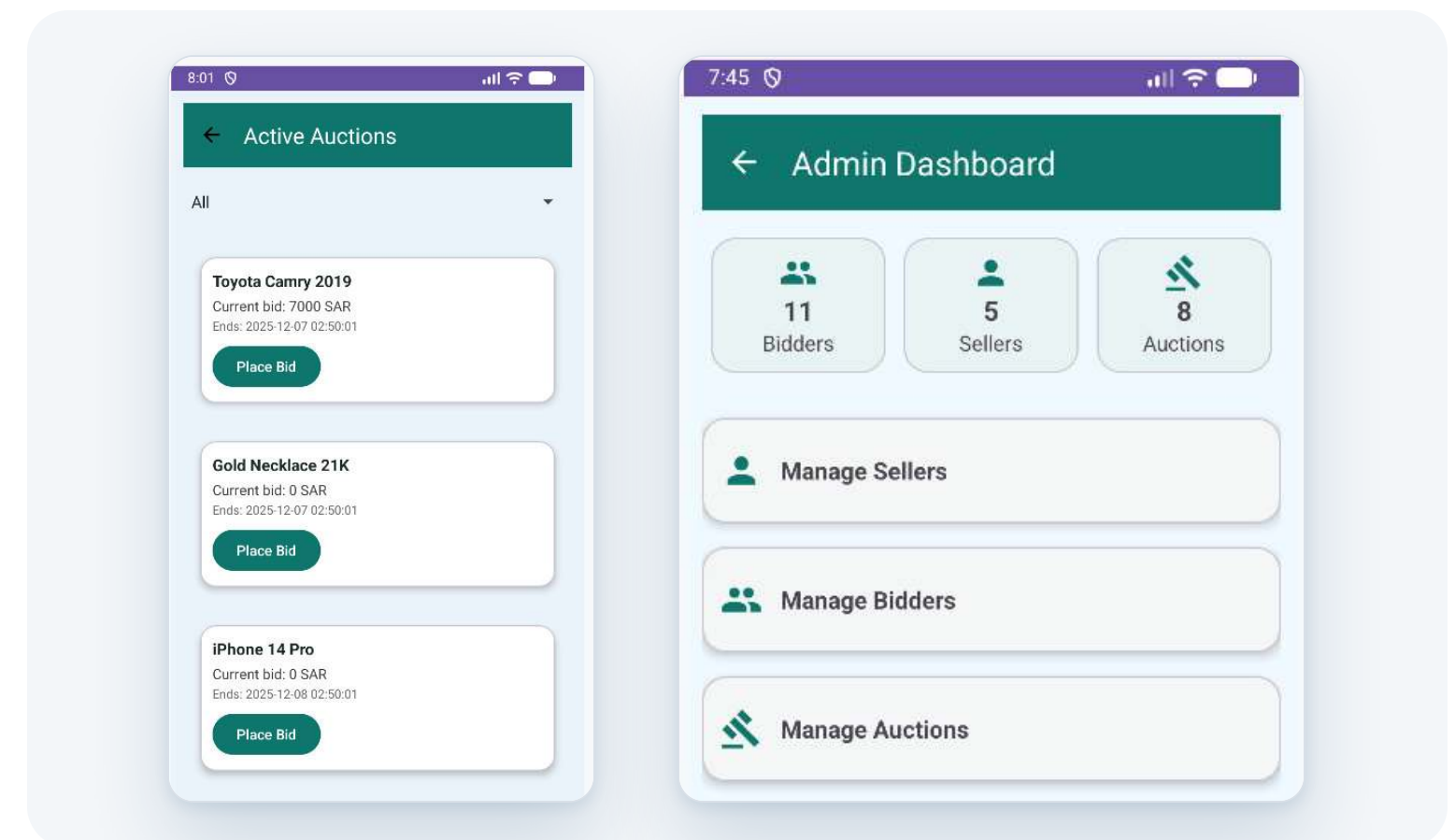
Dr. Mousa Alalhareth

SERVES

Sellers and bidders in Najran

38

Male Campus
First Semester



- 1 Active auctions list with a place-bid button for each item
- 2 Administrator dashboard for managing sellers, bidders and auctions

KEY FEATURES

- ◆ Seller auction creation and management
- ◆ Browsing active auctions and placing bids
- ◆ Admin dashboard for sellers, bidders and auctions
- ◆ Rule-based shill-bidding detection

NU Events

Najran University events, courses and seminars platform

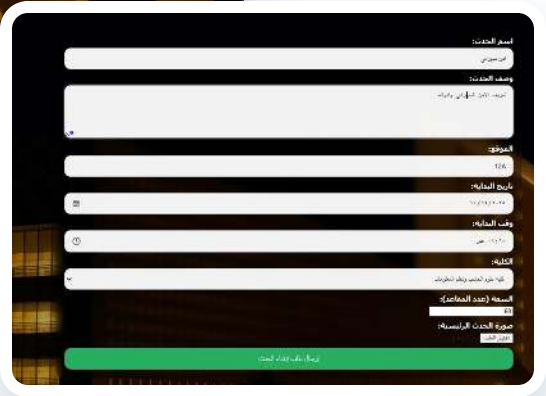
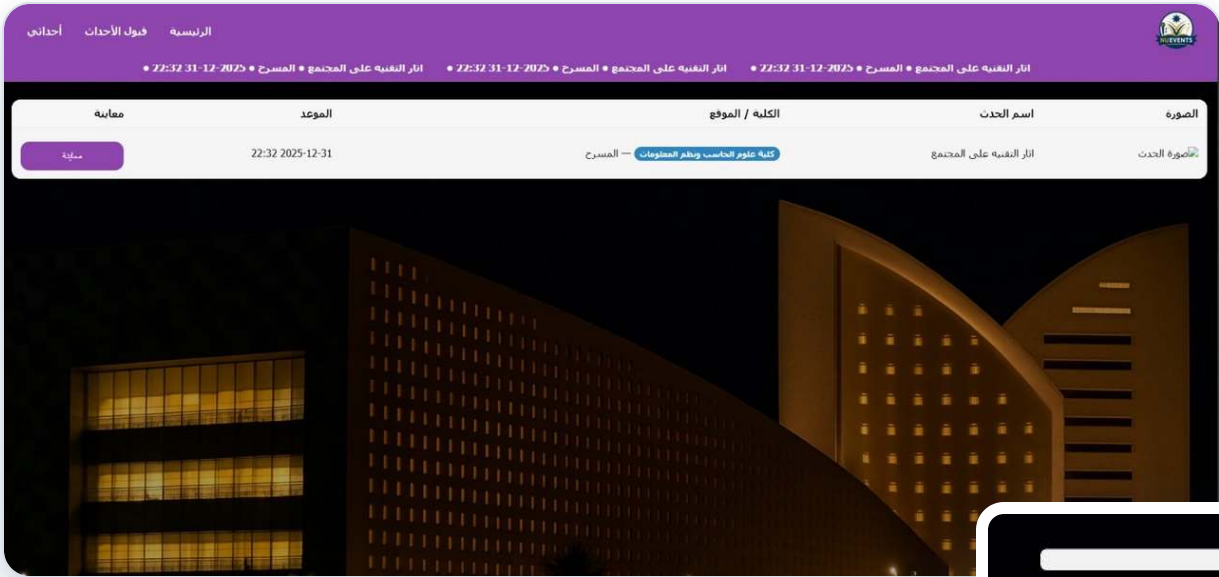
A web application where Najran University students, faculty and staff browse, propose, register for and book seats at campus events.

Events and training courses at Najran University are announced through scattered channels such as social media and university email, so many people miss them and organizers cannot predict attendance. In the team’s survey of 79 university members, 98.7% wanted an application for registering for events and courses with seat reservation and reminders.

The team built NU Events, an Arabic web application written in PHP, HTML, CSS and JavaScript with a MySQL database. Users browse the list of available events, register, reserve a seat and follow their bookings on a My Events page. Students, faculty and staff can submit an event proposal through a form, and an administrator reviews it before it appears in the public list. The report documents this path with screenshots, from proposal and approval to booking, and concludes that the system centralizes event discovery, registration and management.

BUILT WITH

- PHP
- MySQL
- HTML5
- CSS3
- JavaScript



- 1 Available events page listing an event with date and college
- 2 Event proposal form with name, location, date, college and capacity

KEY FEATURES

- ◆ Browse available university events
- ◆ Registration with seat reservation
- ◆ Event proposals reviewed by an administrator
- ◆ My Events page for bookings

TEAM

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Mohammed Ahmed Elmobark

Ziyad Shayim Alanazi
Muhannad Abdul-Hadi Alharbi
Bandar Saeed Al-Wadaei

SUPERVISOR

Dr. Jarallah Alqahtani

SERVES

Najran University
students, faculty and staff

33

PC Price Hunter (PCPH)

Price comparison and recommendations for PC components

A bilingual website where buyers compare PC component prices from retailers and get budget-based recommendations.

Assembling a custom PC is complicated: the range of components is wide, prices change often between stores, and choosing compatible parts needs technical knowledge. Buyers in Saudi Arabia compare stores by hand, which takes time, and existing comparison sites such as PCPartPicker lack Arabic support and local focus.

The team built PC Price Hunter as a responsive ASP.NET Web Forms site written in C# on a Microsoft SQL Server database, with Arabic and English interfaces. Retailers list products and prices from their own dashboard, buyers browse and compare them by price and quality, and administrators manage users and the catalog. A recommendation page ranks products for a chosen category and budget: an ordinary least squares linear-regression model, trained and tested on a CSV file of prices, quality ratings and target scores, predicts a score for each product.

BUILT WITH

ASP.NET

C#

SQL Server

TEAM

Atif Arif Al Hashlan

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Hassan Yahya Alhaiek

SUPERVISOR

Dr. Mana Saleh Al Reshan

SERVES

PC buyers in Saudi Arabia

40

Male Campus
First Semester

33

Business, Commerce & Finance
الأعمال والتجارة والمالية

KEY FEATURES

- ◆ Price comparison across retailer listings
- ◆ Budget-based recommendations from a regression model
- ◆ Separate buyer, retailer and admin roles
- ◆ Arabic and English interface

34

Personal Financial Manager (PFM)

Android app for tracking personal income and expenses

An Android app where individuals record income and expenses by category and read monthly and annual spending reports.

Many people, particularly students and young workers, find it hard to track what they earn and spend. Manual record-keeping is error-prone, and the team found that many existing finance apps are difficult to use or lack automated budgeting tools. Without a clear record, spending patterns stay hidden and saving suffers.

The team designed and built Personal Financial Manager, an Android app written in Java with a PHP and JSON back end over a MySQL database. Members register, log in, record income and expense entries under categories, and open monthly and annual reports that summarize their balances. Administrators manage financial categories, complaints and user reviews. The database holds six tables, including users, incomes, expenses and notifications, and passwords are stored as hashes. The team tested the app on phones with a small group of university classmates, who found the dashboard cards and report summaries clear. The report gives no quantitative results.

BUILT WITH

Java

Android Studio

PHP

MySQL

JSON

TEAM

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Bader Ali Alhamami

Turki Nasser Alyami
Mana Hadi Mana Al Alhareth

SUPERVISOR

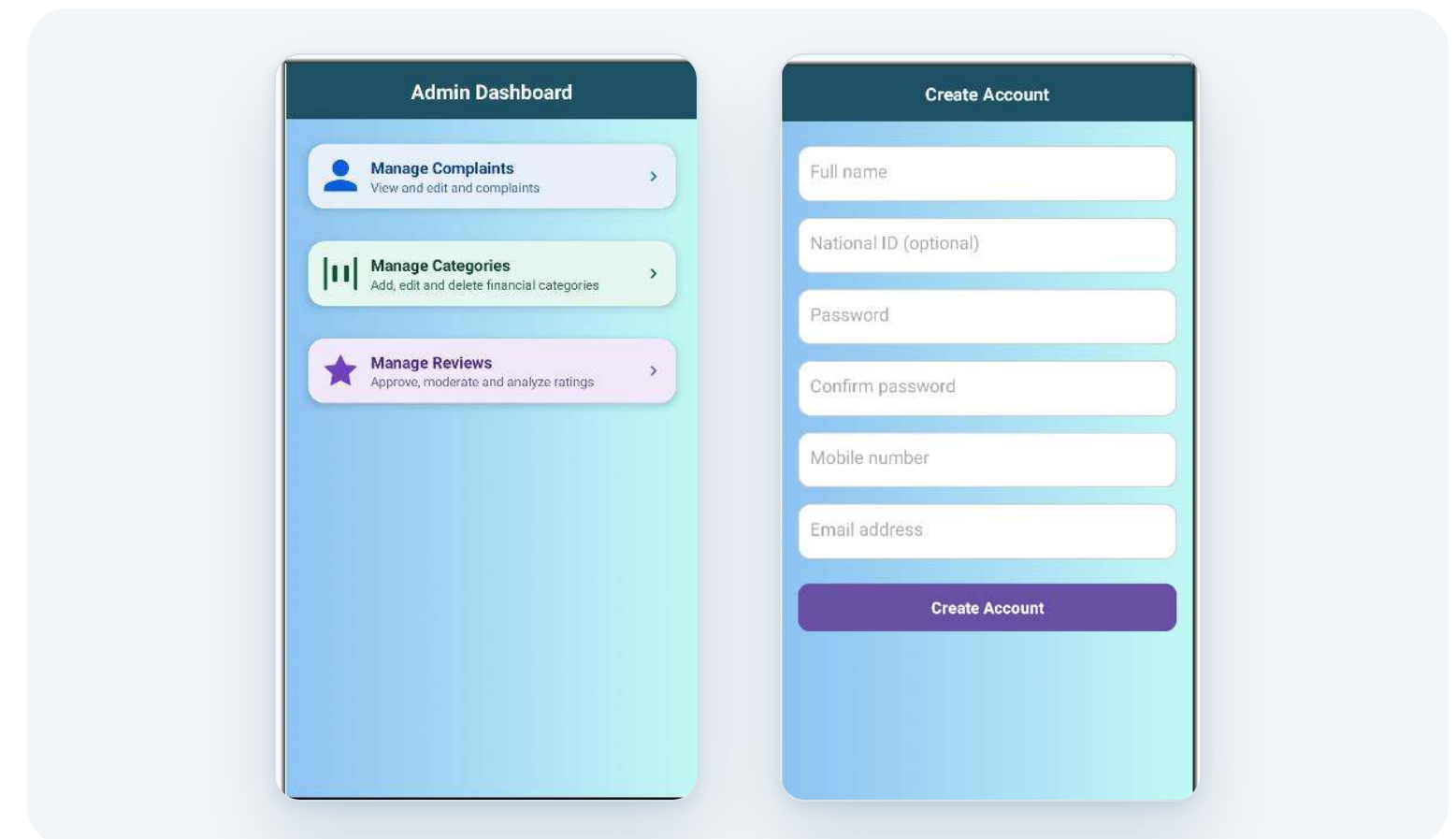
Dr. Abdulmajeed Alqhatani

SERVES

Individuals, especially
students and employees

41

Male Campus
First Semester



- 1 Administrator dashboard with complaints, categories and reviews
- 2 Create account screen of the mobile app

KEY FEATURES

- ◆ Income and expense recording by category
- ◆ Monthly and annual spending reports
- ◆ Admin management of categories, complaints and reviews
- ◆ Member and administrator roles

35

PhishScan

Machine-learning phishing URL detector

A web platform that classifies website links as Safe or Suspicious so users can check a URL before opening it.

Phishing links and fraudulent websites expose users to the loss of passwords, personal data and financial details. Many users cannot tell safe links from suspicious ones, and blacklists mainly depend on previously known malicious sites, while new phishing links appear and disappear quickly.

The team built PhishScan with Python and Flask, an HTML and CSS interface and a MySQL database. A scan turns a URL into 14 numerical features, such as length, HTTPS usage, special characters, IP address use, shortened links and suspicious words. A random forest model trained on a cleaned, balanced Kaggle dataset returns Safe or Suspicious with safety guidance. Guests can scan without an account, registered users keep a scan history, and an administrator manages training URLs and retrains the model. The final presentation reports 80.40% accuracy on 2,500 held-out test URLs from the 10,000-URL dataset.

BUILT WITH

Python

Flask

HTML

CSS

MySQL

Random Forest

XAMPP

TEAM

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Manal Rayed Almustaneer

Wesam Mohammed Al-Nsaib

SUPERVISOR

Dr. Majda Omer Ali

SERVES

General web users

42

Female Campus
Second Semester

URL scan page of the PhishScan web interface

KEY FEATURES

- ◆ URL scanning with Safe or Suspicious result
- ◆ Guest scans and saved history for registered users
- ◆ Admin management of training URLs
- ◆ One-click model retraining and performance metrics

PlantCare AI

Plant disease recognition and treatment app

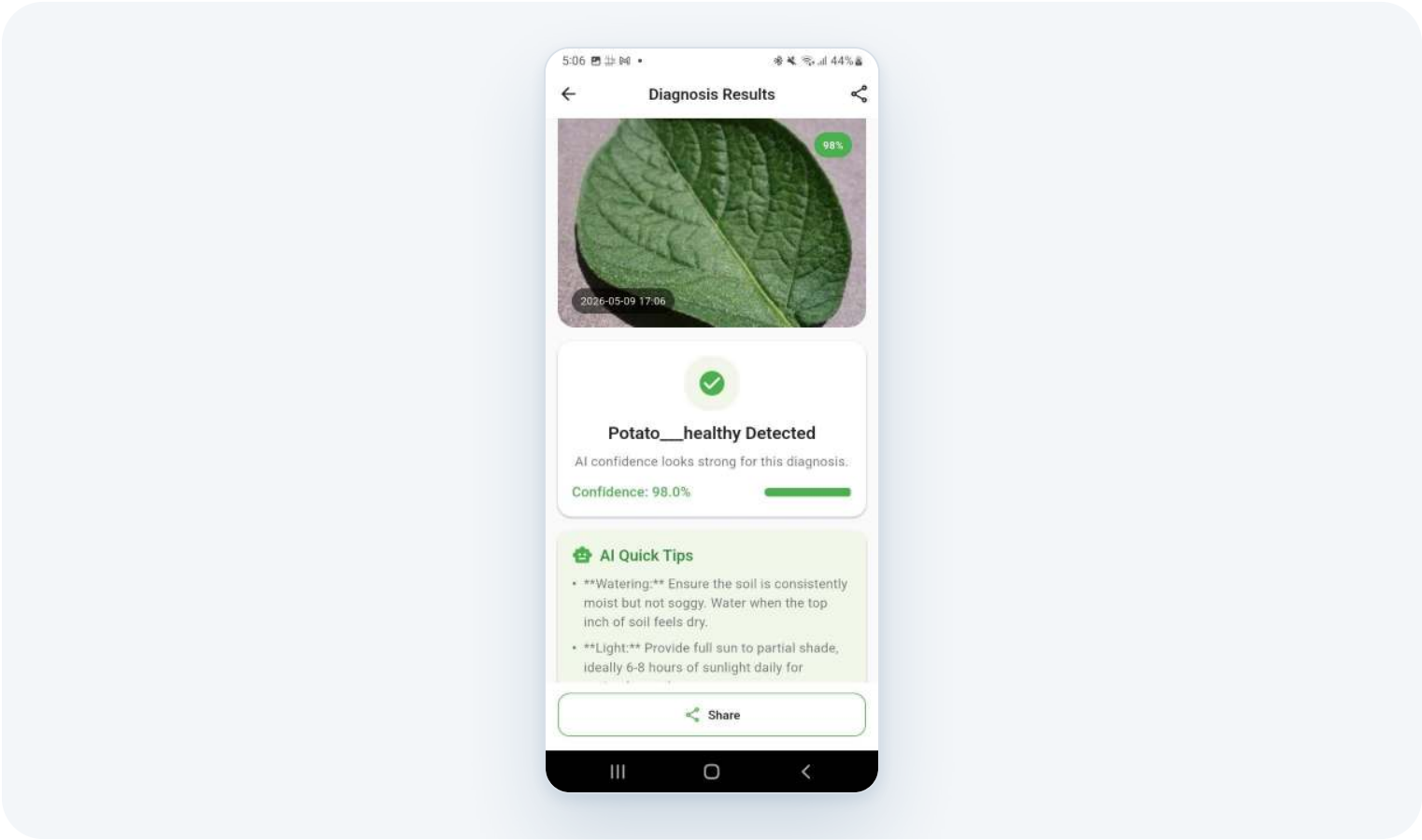
A mobile app that identifies plant diseases from leaf photos and gives treatment guidance to farmers and plant enthusiasts.

People interested in agriculture and plants often struggle to diagnose plant diseases early. Personal experience is unreliable, agricultural experts are not always available, and late diagnosis usually leads to production losses. In the team’s own survey, accurately identifying plant diseases was the most frequently reported challenge.

The team built PlantCare AI, a Flutter mobile app. A user photographs a leaf, and the app sends the image to a Flask API where a ResNet9 convolutional network, trained on more than 70,000 images, classifies it into 38 plant health classes. Treatment guidance comes from an OpenAI language model called through Supabase Edge Functions, with the scan result added to the prompt. Users can also save plants and set care reminders. The report gives 98.40% validation accuracy for the model and notes that the final system needs an internet connection.

BUILT WITH

- Flutter
- Flask
- Python
- ResNet9
- Supabase
- OpenAI API



Diagnosis results screen with confidence score and AI quick tips

KEY FEATURES

- ◆ Leaf photo diagnosis with confidence score
- ◆ Treatment advice from an AI assistant
- ◆ Saved plants and scan history
- ◆ Care reminders for each plant

TEAM

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Rand Hamad

Alanoud Misfer
Aryam Al-Amer

Raznah Alqahtani
Rahaf Ibrahim Abosaq

SUPERVISOR

Dr. Mimonah Alqathrady

SERVES

Farmers, researchers
and plant enthusiasts

37

Save Parking

Parking reservation app for Najran University

A mobile app for Najran University users to check parking availability, reserve a spot and receive a QR code.

Parking at Najran University is poorly organized. Lots are overcrowded, access is not controlled, and unauthorized vehicles can use them. Students, faculty and staff lose time searching for a free space because no real-time view of occupancy exists.

The team built Save Parking, a cross-platform mobile app using Flutter and Firebase. Users register and sign in with university accounts, choose their college, and see each parking section as a grid of free and occupied spots backed by Cloud Firestore. They can reserve a spot and receive a QR code with the booking details, and a contact page lets them send complaints or inquiries. An administrator interface manages users and colleges and reviews complaints. The report documents registration, login, password recovery, parking and administration test cases and states that all of them passed.

BUILT WITH

Flutter

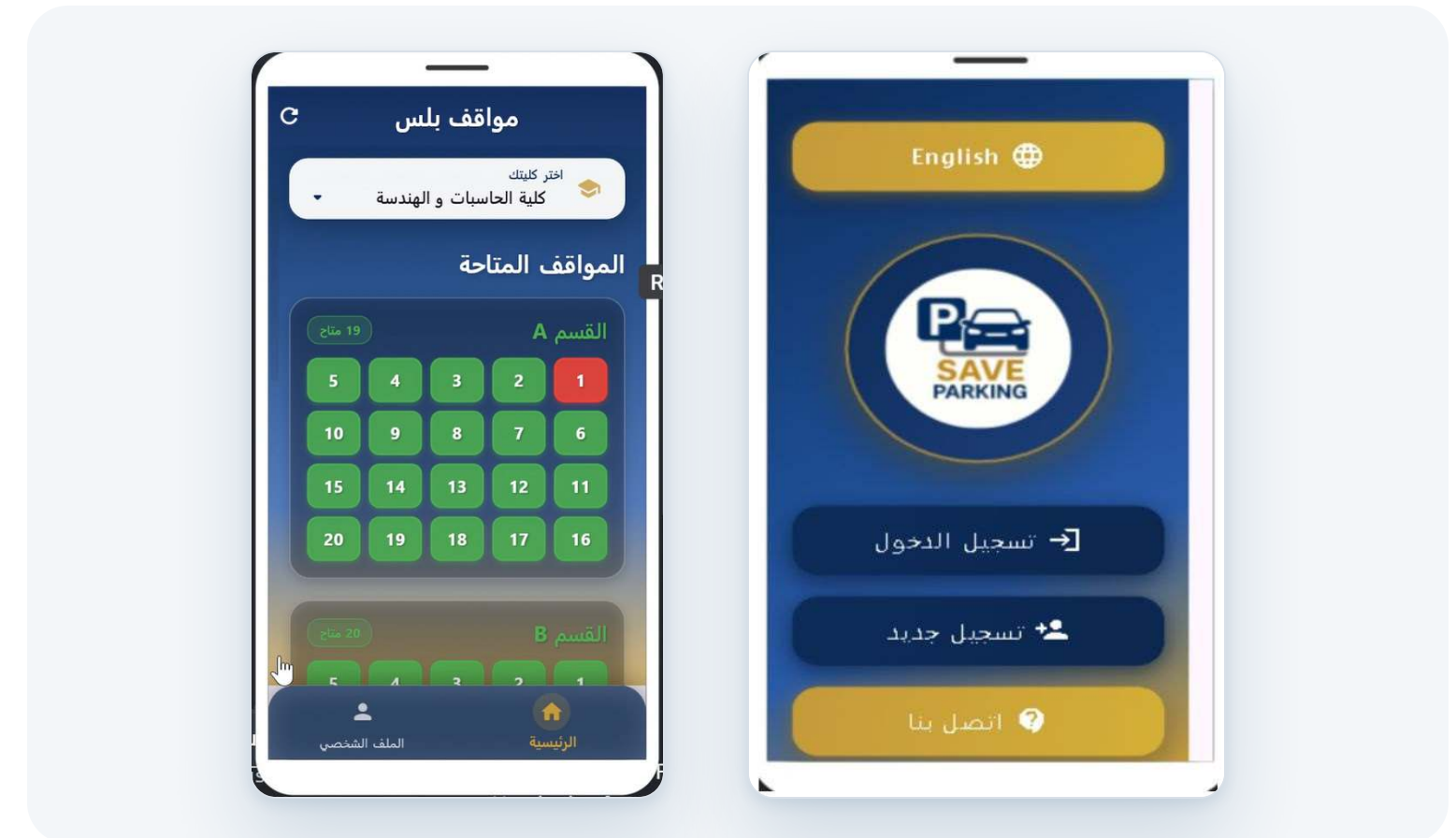
Dart

Firebase

Cloud Firestore

GetX

QR Flutter



- 1 Parking screen showing available and occupied spots by section
- 2 Welcome screen with language switch, sign-in, registration and contact options

KEY FEATURES

- ◆ Real-time parking availability by section
- ◆ Spot reservation with a QR code
- ◆ Contact page for complaints and inquiries
- ◆ Administrator panel for users and colleges

TEAM

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Ghadey Saud Alshaiban

Mzoon Hussein Alsogor
Haifa Hussein Almonajem

SUPERVISOR

Dr. Asmaa Alrayzah

SERVES

Najran University
students, faculty and staff

44

Female Campus
First Semester

38

SDAMS

Secure Digital Attendance Management System

A web system where instructors issue time-limited session codes and students record lecture attendance at Najran University.

At Najran University, lecturers in large classes can spend 5 to 10 minutes on manual roll calls, and half-electronic tools such as Google Forms still need hand processing. Students can also sign in for absent classmates or share codes, which weakens the attendance record, and the existing attendance process is separate from the university’s learning management and student information systems.

The team built SDAMS, a web application with student, instructor and administrator roles, using HTML, CSS, JavaScript, PHP and MySQL. Instructors generate a time-limited session code for each lecture. Students enter it on a check-in page that includes a browser location step written in JavaScript, and the server rejects duplicate submissions. Administrators manage users, reports and analytics, and PHPMailer supports password recovery. The report lists eight test cases covering login, code generation, submission, reports and password reset, all recorded as passed.

BUILT WITH

- HTML5
- CSS3
- JavaScript
- PHP
- MySQL
- PHPMailer
- XAMPP



- 1 Instructor screen showing an active attendance code with countdown timer
- 2 Administrator dashboard with user and course overview

KEY FEATURES

- ◆ Time-limited attendance codes for each lecture
- ◆ Student check-in with duplicate prevention
- ◆ Role-based dashboards for three user types
- ◆ Attendance reports and analytics for administrators

TEAM

Mohammed Abdullah Al-Aqil
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Zaher Hussain Al-Shehri

Hussain Sales Ali Al-Alaji
Hamod Nafel Al-Demnan

SUPERVISOR

Dr. Ali Saeed Al-Qahtani

SERVES

Najran University instructors,
students and administrators

45

Male Campus
Second Semester

39

SENT: Smart Environmental Navigation and Tracking Robot

Indoor robot detecting gas leaks and water spills

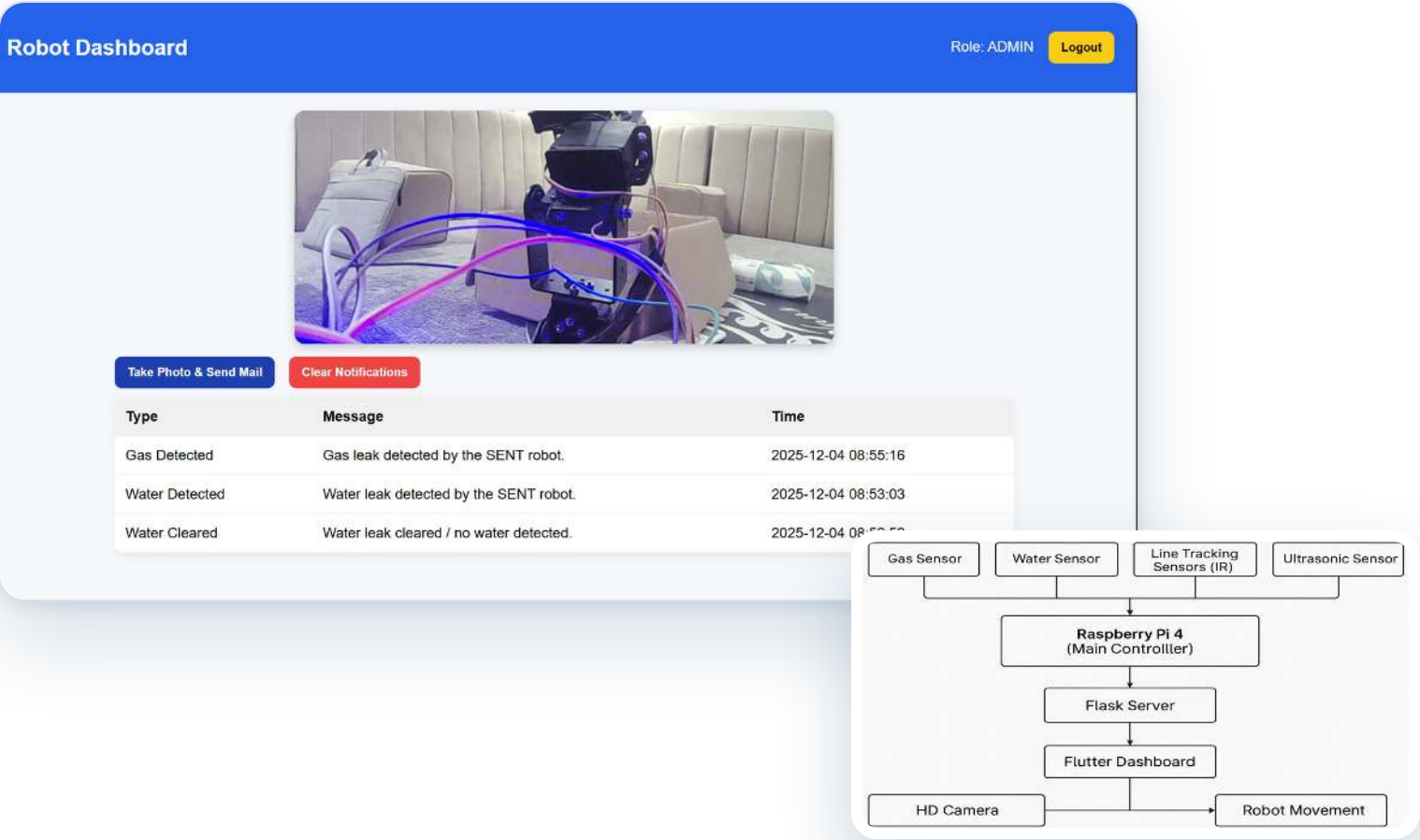
An indoor Raspberry Pi robot that detects gas leaks and water spills in the college building and alerts administrators.

Hallways, labs and classrooms in a university building can go unchecked for long periods, and water spills or gas leaks there may cause slips, electrical risks and equipment damage. Manual inspection is slow and inconsistent, and ordinary surveillance cameras show a scene but do not detect these hazards.

The team built SENT on the XiaoR Geek tank-chassis robot kit with a Raspberry Pi 4, a gas sensor, a water sensor, an ultrasonic sensor and an HD camera. A Flask server on the robot logs events and sends alerts by email and by WhatsApp through the Twilio API, and mjpg-streamer provides live video. A Flutter dashboard gives administrators controls to take photos and clear logs, while regular users can only view alerts and the stream. The robot moves under manual control or follows a black line. The final presentation shows the dashboard listing gas and water events from the robot.

BUILT WITH

- Raspberry Pi 4
- Python
- Flask
- Flutter
- Twilio API
- mjpg-streamer



- 1 Admin dashboard with live camera view and gas and water alert log
- 2 System overview: sensors, Raspberry Pi 4, Flask server and Flutter dashboard

KEY FEATURES

- ◆ Gas leak and water spill detection
- ◆ Email and WhatsApp alerts to administrators
- ◆ Live camera stream in a Flutter dashboard
- ◆ Manual and black-line-following movement

TEAM

- Mohsen Zaid Hermes Al Jarah
- Ali Hadi Al-Abbas
- Faris Hussain Mana Al-Abbas
- Ali Qamzan Ahmed Al Qamzan
- Ali Misfer Alhaddad
- Mesfer Abdullah Mesfer Alslom

SUPERVISOR

Prof. Asadullah Shaikh

SERVES

College administrators and staff at Najran University

46

Male Campus
First Semester

40

Smart Expression Platform

AI emotion support for autistic children and parents

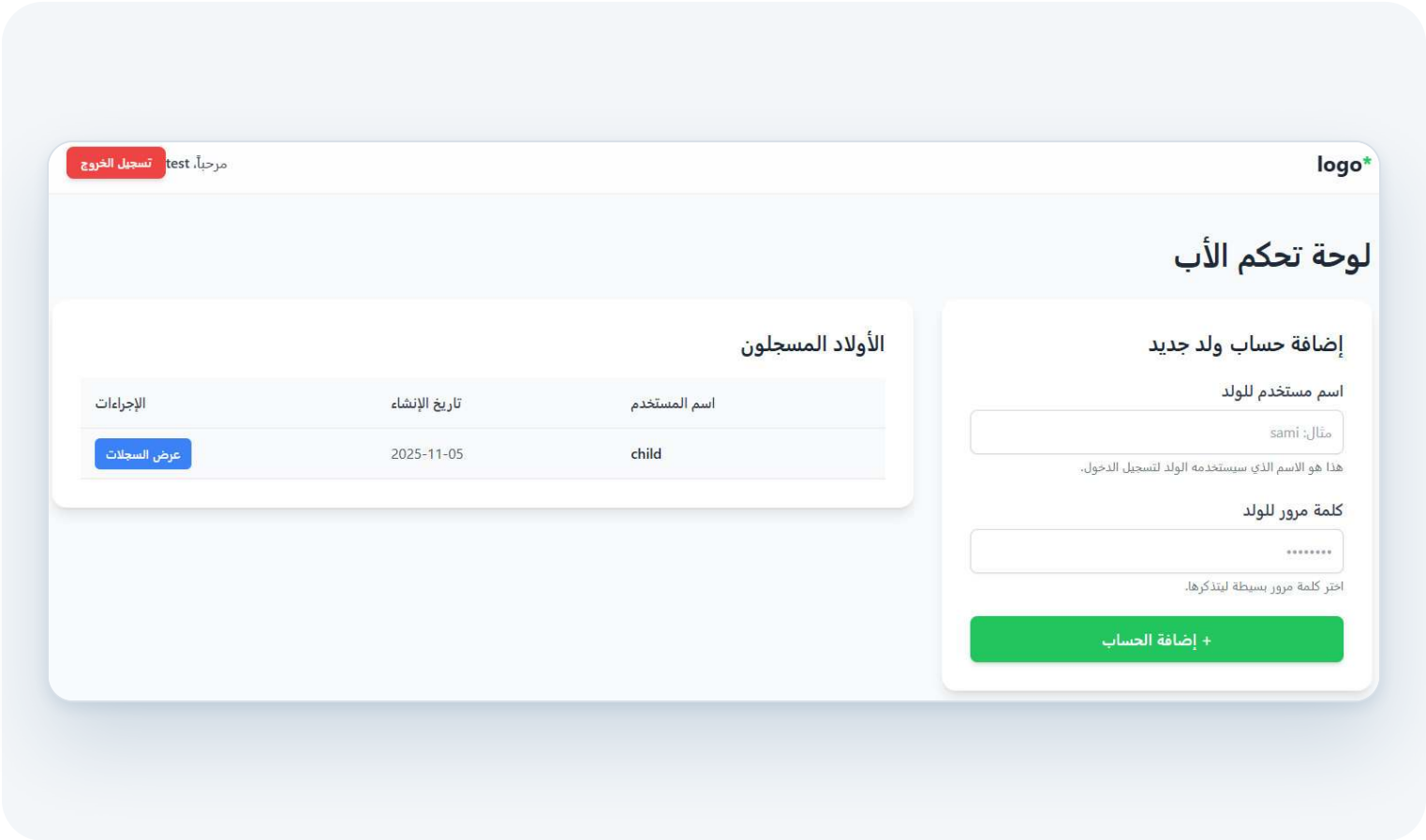
A web platform where children write about their feelings, AI detects the emotion, and parents review the history on a dashboard.

Children with autism and other disabilities often find it hard to express emotions, needs and desires. The team’s report notes that existing tools tend to be rigid, one-size-fits-all designs with little emotion recognition, which leaves users dependent on caregivers and their emotions open to misinterpretation.

The team built a web platform in PHP with a MySQL database and a JavaScript and Tailwind CSS front end. Parents register and then create separate accounts for each child. On a page called “Speak Your Heart Out”, a child writes about something that happened, and the server sends the text to the ChatGPT API, which detects the feeling and replies. Parents see each child’s interaction history on a dashboard, and login validation was tested with documented scenarios. The report concludes that the system shows strong potential for supporting children’s emotional awareness and parental involvement.

BUILT WITH

- PHP
- MySQL
- JavaScript
- Tailwind CSS
- ChatGPT API



Parent dashboard for adding child accounts and viewing records

KEY FEATURES

- ◆ Parent registration and child accounts
- ◆ Text-based emotion detection with AI replies
- ◆ Parent dashboard with child history
- ◆ Separate parent and child access roles

TEAM

Arwa Hassan Al Saiari
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Fatimh Mohmmad Sultan
Razan Abdullah Al Ghobari

SUPERVISOR

Dr. Samar Alqhtani

SERVES

Autistic children,
parents and caregivers

47

Female Campus
First Semester

41

Smart Glucometer

Diabetes monitoring app for patients, doctors and parents

An Android app that lets diabetes patients share glucose readings, alerts and emergency requests with their doctor and a linked parent.

Diabetes care depends on regular blood glucose checks, yet traditional meters involve finger pricking, recurring strip costs and limited data tracking. Patients at risk of sudden fainting also need a way to alert healthcare staff and a trusted person when their condition changes.

The team built an Android app in Java with a PHP and MySQL back end, with separate roles for administrators, doctors, patients and parents. Administrators manage doctor, patient and parent accounts. Patients link to a doctor and a parent, view readings and alerts, chat with their doctor and send SOS requests. Doctors handle link requests and review reading reports, and parents follow a linked patient's readings. Passwords are hashed with PHP's password_hash, and a web page lets readings be entered manually. The team tested login and registration validation messages. The report also outlines a near-infrared sensor design as the intended measuring device.

BUILT WITH

Android Studio

Java

PHP

MySQL

TEAM

Yazan Awad Alwadei
Rayan Awad Alqarni

Sultan Mohmmad Alamri
Abduallelah Ahmad Yaar

Ammar Ahmad Alqahtani

SUPERVISOR

Dr. Mohammed Hamdi

SERVES

Diabetes patients, their
doctors and parents

48

Male Campus
First Semester

41

Health & Wellbeing

الصحة والرفاه

KEY FEATURES

- ◆ Doctor, patient and parent accounts with admin control
- ◆ Glucose reading reports for doctors and parents
- ◆ SOS requests and chat with the doctor
- ◆ Hashed passwords and input validation tests

42

Smart Traffic Accident Detection Device

An in-vehicle device that detects road accidents and sends the vehicle’s GPS location to police and ambulance services over LoRaWAN.

Najran has seen a continuing rise in traffic accidents, and emergency teams often arrive late because reporting depends on eyewitnesses or phone calls and the reported location can be inaccurate, which can worsen injuries. A public survey run by the team showed strong support for automatic accident detection.

The team designed an in-vehicle device in which an Arduino or ESP32 board reads an MPU6050 motion sensor and a GPS module and sends alerts over LoRaWAN, through The Things Network, to a cloud platform for police and ambulance services. In Python, they trained a random forest and a CNN-LSTM model on simulated BeamNG.drive sensor data to separate normal driving, aggressive driving and accidents, choosing the CNN-LSTM as the primary classifier and the random forest as a lightweight option.

BUILT WITH

Python

Random Forest

CNN-LSTM

BeamNG.drive

ESP32

MPU6050

LoRaWAN

The Things Network

TEAM

Ghaid Hamad Musallam
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Noor Idris Almakrami
Dona Hassan Hussein Jawah

Rahaf Arif Hashil
Shouq Eidaha Alorayf
Sara Mohammad Aldarbi

SUPERVISOR

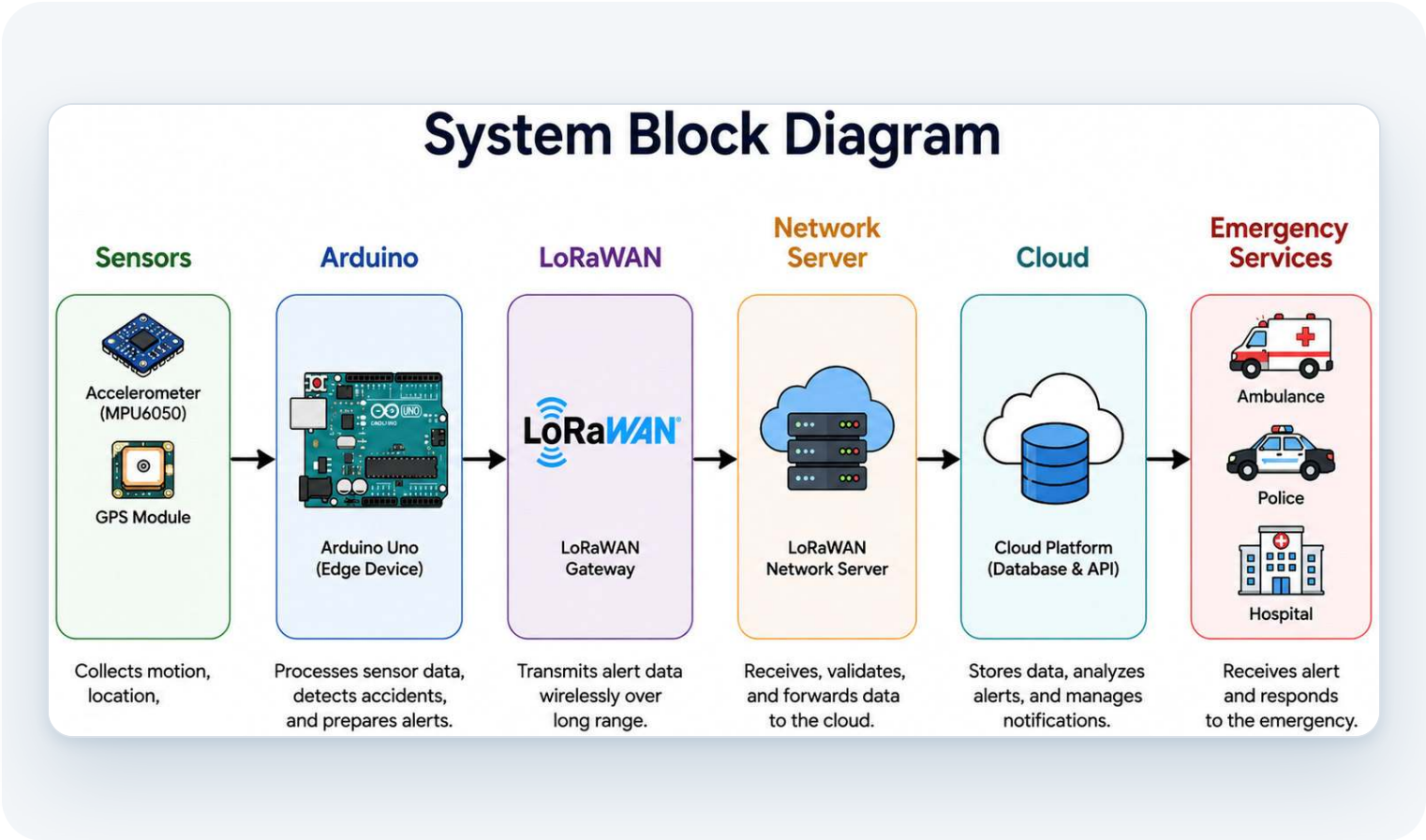
Dr. Yahya Ali

SERVES

Police, ambulance
teams and drivers

49

Female Campus
Second Semester



System block diagram from sensors to LoRaWAN, cloud and emergency services

KEY FEATURES

- ◆ Accident detection from motion sensor data
- ◆ GPS location in every alert
- ◆ Long-range LoRaWAN alert transmission
- ◆ Normal, aggressive and accident classification

43

Student Activities Hub

Event and resource management for the college

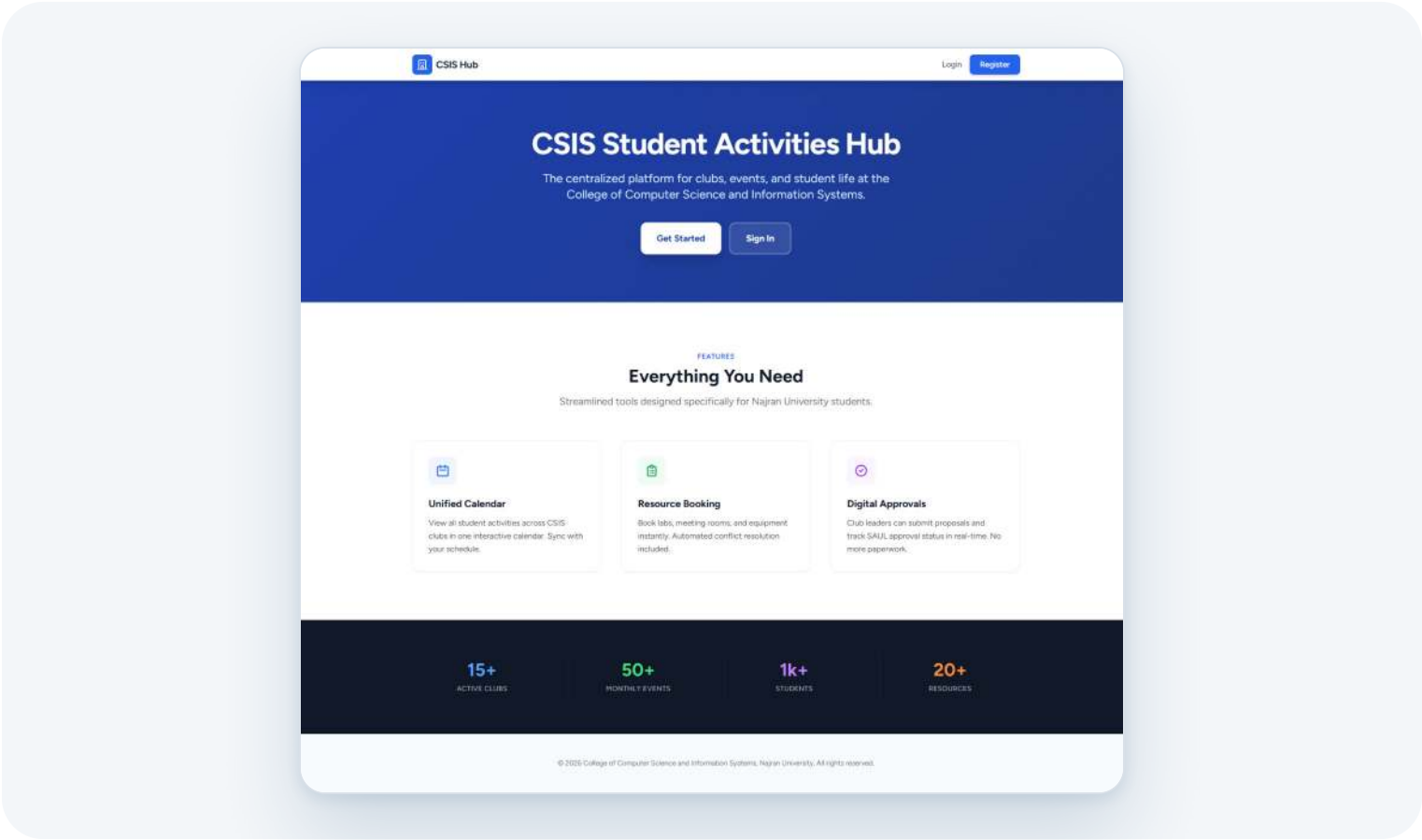
A web platform where students, club leaders and the Student Activity Unit schedule, approve and book resources for college events.

Student clubs at the College of Computer Science and Information Systems at Najran University coordinate activities through paper forms, group chats and informal scheduling. With no shared calendar, clubs schedule events at the same time, rooms and labs are double-booked, and students struggle to find out what is happening.

The team built the CSIS Student Activities Hub, a Laravel and MySQL web application with a Tailwind CSS interface, developed with Agile Scrum in a three-tier architecture. Club leaders create clubs and propose events that pass through a multi-step approval by the Student Activity Unit. Students browse an interactive calendar, favorite events and receive notifications. A booking module for labs, rooms and halls prevents double-booking, and role-based access gives students, club leaders, unit staff and administrators separate views. The report lists 16 manual test cases covering registration, login, approvals, events and profile updates, and states that all passed.

BUILT WITH

- Laravel
- PHP
- MySQL
- Tailwind CSS
- Alpine.js
- Apache



Landing page of the CSIS Student Activities Hub web platform

KEY FEATURES

- ◆ Interactive calendar of approved events
- ◆ Resource booking with conflict prevention
- ◆ Multi-step event approval workflow
- ◆ Role-based access for four user groups

TEAM

Hashan Fahad Hashan Al Yami
Abdullah Mohammed Mahdi Al Swar
Naif Yahya Al Hawwah

Trad Hassan Ali Al-Balhareth
Talal Mohammed Al Fahad
Ayoub Amer Nasser Al-Saed

SUPERVISOR

Dr. Mohammed Al Zamanan

SERVES

CCSIS students, club
leaders, the Student Activity
Unit and administrators

50

Male Campus
Second Semester

44

TeamUp

Smart platform for academic projects

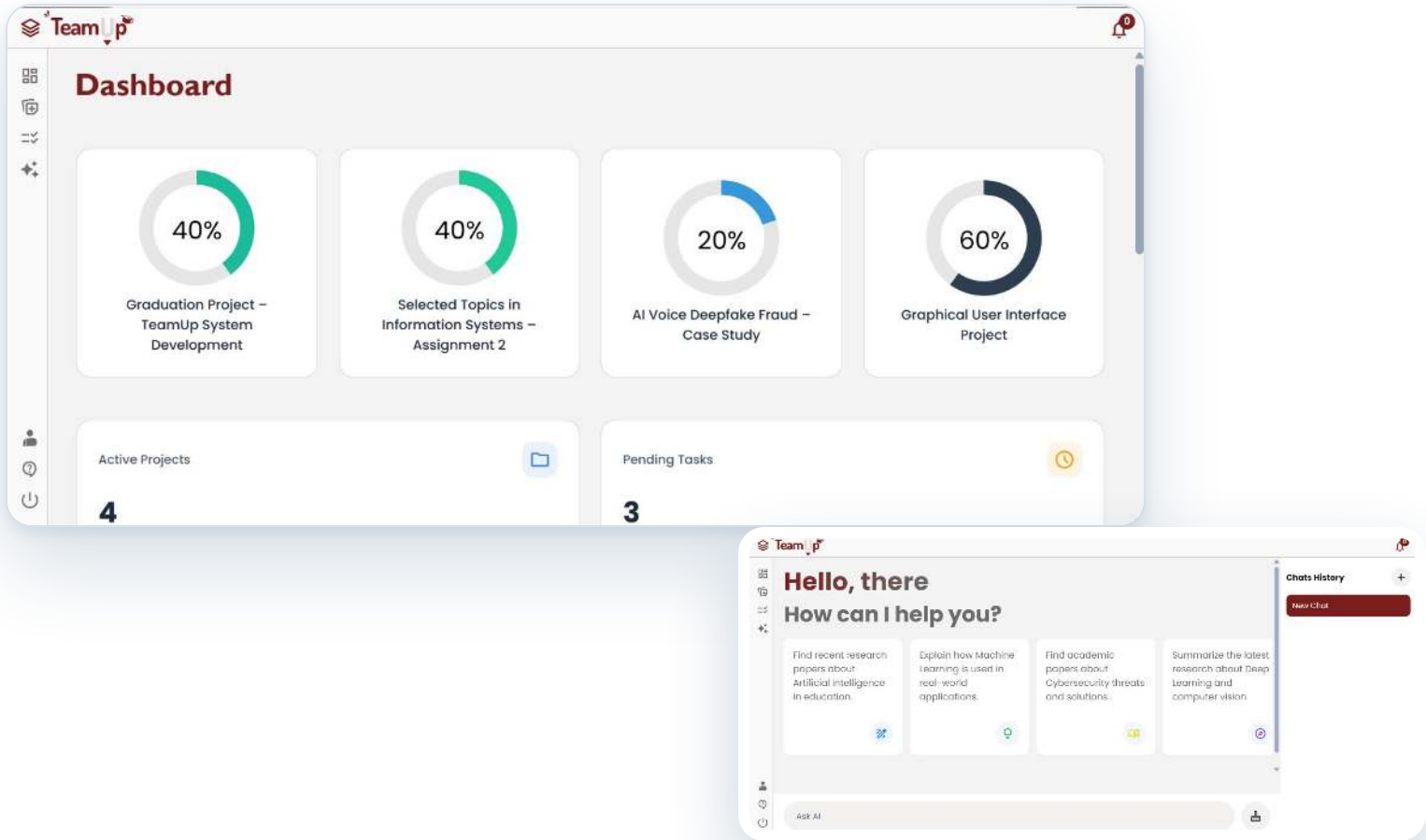
A web platform where students and faculty organize group projects, track progress and get AI help with research and file checks.

Students at the College of Computer Science and Information Systems manage group projects through informal communication and unclear task distribution. This leads to uneven workloads, late submissions and difficulty finding suitable academic sources, while supervisors have little visibility into each member’s progress.

The team built TeamUp as a web application with JavaScript, Node.js, Express and a MySQL database. Students create projects, assign tasks, track progress on a dashboard and talk through built-in chat or Zoom. An AI research assistant uses the Gemini API and Semantic Scholar to find and summarize papers, and an AI file checker uses a language model through the Hugging Face API to compare a submitted file with task requirements. Faculty members have their own view to follow projects. The report presents the implemented interfaces and a set of documented test cases.

BUILT WITH

- JavaScript
- Node.js
- Express
- MySQL
- Chart.js
- Gemini API
- Semantic Scholar API
- Hugging Face API



- 1 Student dashboard showing progress rings for active projects
- 2 AI research assistant chat page with suggested academic prompts

KEY FEATURES

- ◆ Task distribution with progress dashboard
- ◆ Project chat and Zoom meeting links
- ◆ AI research assistant for finding papers
- ◆ AI checker comparing files with requirements

TEAM

Rayah Ali Al-Zamanan
Shahad Hamad Al-Aqeel

Hadeel Hassan Al-Askar
Renad Ali Bal-Harith

Razan Mubarak Al-Yami

SUPERVISOR

Ms. Malak Alsufyani

SERVES

Students and faculty of the college

51

Female Campus
Second Semester

45

The Drive Learning Application

Android app teaching safe driving and basic car care

An Android app that teaches new drivers in Saudi Arabia safe driving and basic car maintenance through lessons, quizzes and a forum.

Many new drivers in Saudi Arabia need simple Arabic guidance on safe driving and basic car care. The team found separate apps for driving tests and for maintenance, none combining the two, and many that lack Arabic support or are hard to use, which pushes learners to abandon them after one visit.

The team designed and built an Android application in Java that joins driving lessons, maintenance basics, quizzes and a discussion forum in one place. Three roles use it: learners enroll in courses and take quizzes, instructors add lessons and create quizzes, and administrators manage learners and moderate content. The forum supports posts, comments and likes, and learners rate lessons. PHP scripts connect the app to a MySQL database. The team tested registration, login, lessons, quizzes and role access, and a small group of university peers tried the app and reported that the interface was clear.

BUILT WITH

Java

Android Studio

PHP

MySQL

JSON

TEAM

Abdullah Saleh Mohammed Al-Sharif
Amer Saleh Mohammed Al-Alharith
Mohammed Khaled Al Quraisha

Abdullah Mohammed Al Yami
Ali Manasar Al-Shareef

SUPERVISOR

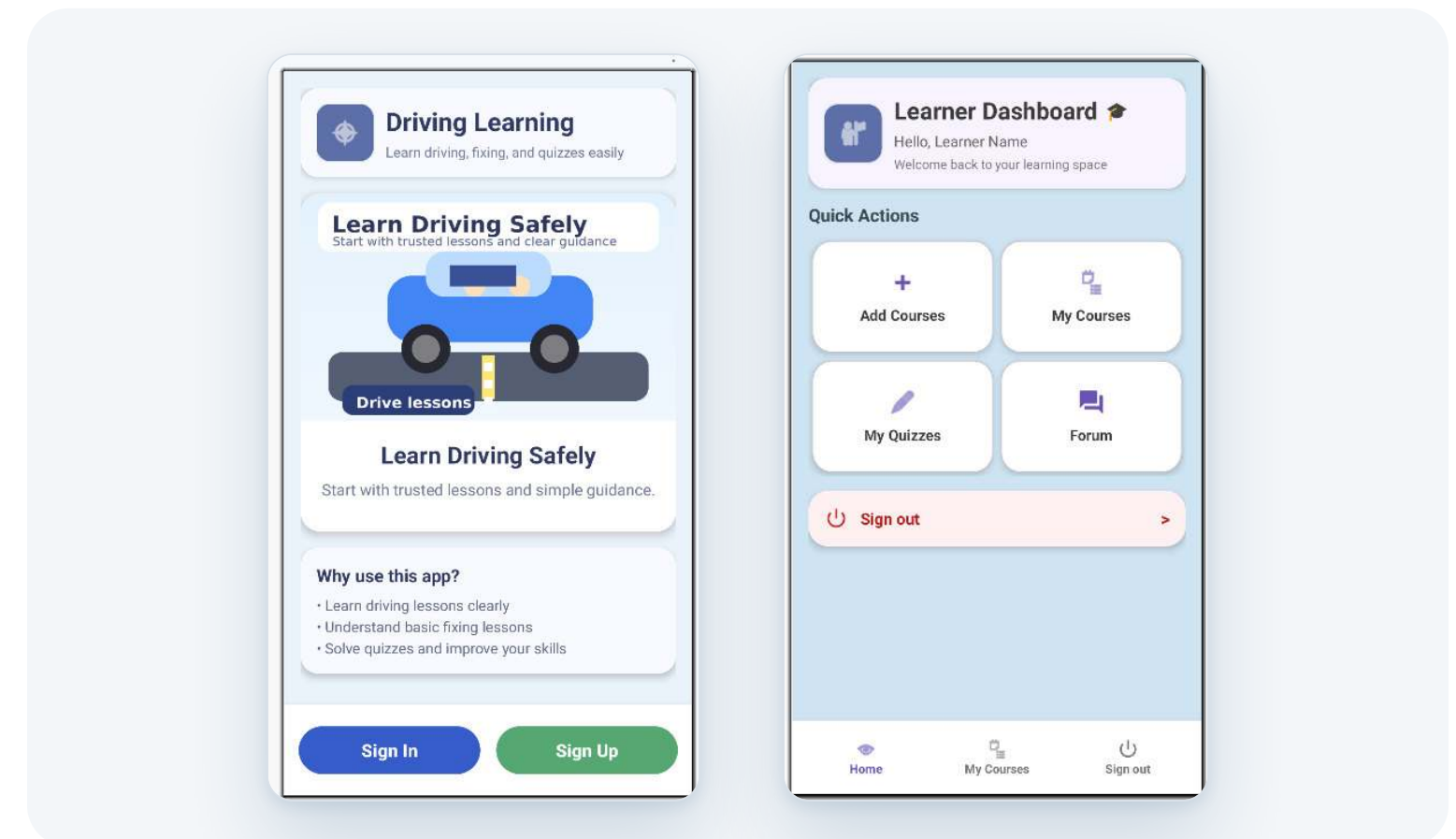
Dr. Abdulmajeed Alqhatani

SERVES

New and newly licensed
drivers in Saudi Arabia

52

Male Campus
Second Semester



- 1 Welcome screen with sign-in and sign-up buttons
- 2 Learner dashboard with courses, quizzes and forum actions

KEY FEATURES

- ◆ Driving and car maintenance lessons
- ◆ Lesson quizzes with immediate feedback
- ◆ Forum posts, comments and likes
- ◆ Separate learner, instructor and admin roles

46

TraineeConnect

Web internship platform for students in Saudi Arabia

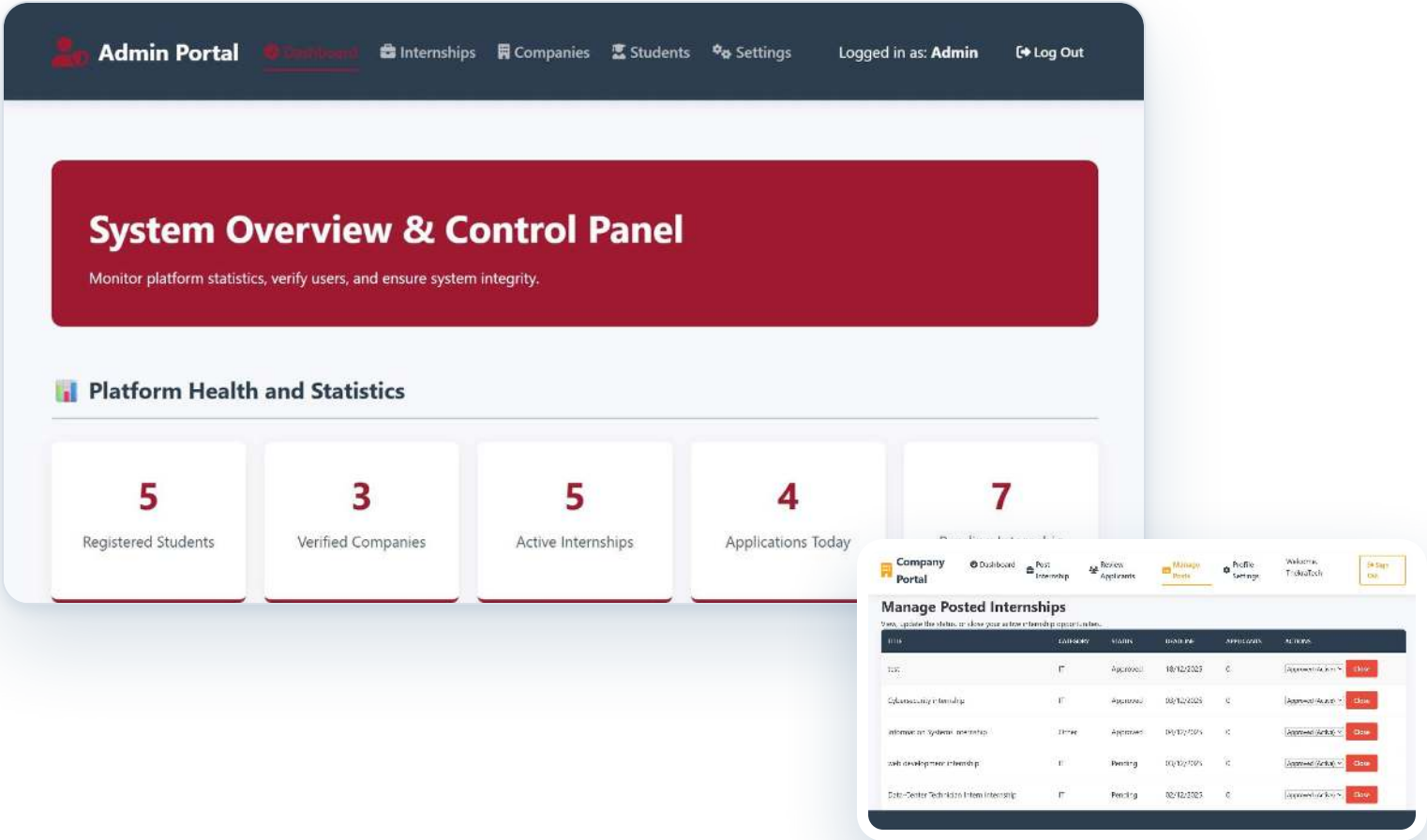
A web platform where students apply for internships, companies post and review them, and university administrators oversee the process.

Students in Saudi Arabia often struggle to find internships that match their studies or career path, and companies find it hard to reach capable candidates. Matching students with openings relies on manual, laborious processes, and no centralized platform connects students, companies and universities.

The team built TraineeConnect following an Agile approach, with HTML and CSS pages, a Node.js and JavaScript back end and a MongoDB database. Students register, build a profile, search internships and track the status of their applications. Companies post internships, review applicants and accept or reject them. Administrators verify companies, manage students and internships, and approve placements from a dashboard. The team states that the system covers admission and registration only. Follow-up and evaluation during training, full admin control and fuller company and student views are listed as future work.

BUILT WITH

- Node.js
- JavaScript
- MongoDB
- HTML
- CSS



- 1 Admin portal dashboard with platform statistics
- 2 Company portal page for managing posted internships

KEY FEATURES

- ◆ Student registration, profiles and internship search
- ◆ Company posting and applicant review
- ◆ Admin verification of companies and approval of placements
- ◆ Application status tracking for students

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SERVES

University students, companies
and university administrators

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Female Campus
First Semester

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UDP Flood Attack Detection in IoT Using Machine Learning

A machine-learning detector that separates normal IoT network traffic from UDP flood attacks for use in intrusion detection systems.

UDP flood attacks are a common form of denial-of-service attack. Attackers send a continuous stream of UDP packets, often with spoofed IP addresses, until a target runs out of resources and stops serving other requests. Internet of Things networks are exposed to this threat, and the team notes that existing machine-learning detectors struggle with imbalanced data and false alarms.

The team built a machine-learning detector intended to run inside a network intrusion detection system. Using normal and UDP flood traffic from the CIC IoT 2023 dataset, they balanced the classes with SMOTE and trained random forest, decision tree, XGBoost and SVM classifiers in Python on flow-based features such as packet rate and flag counts. The models were compared on accuracy, precision, recall and F1-score. On the team's test set, accuracy ranged from 99.02% for SVM to 99.70% for random forest, which scored highest on all four metrics.

BUILT WITH

Python

pandas

scikit-learn

XGBoost

imbalanced-learn

CIC IoT 2023 dataset

TEAM

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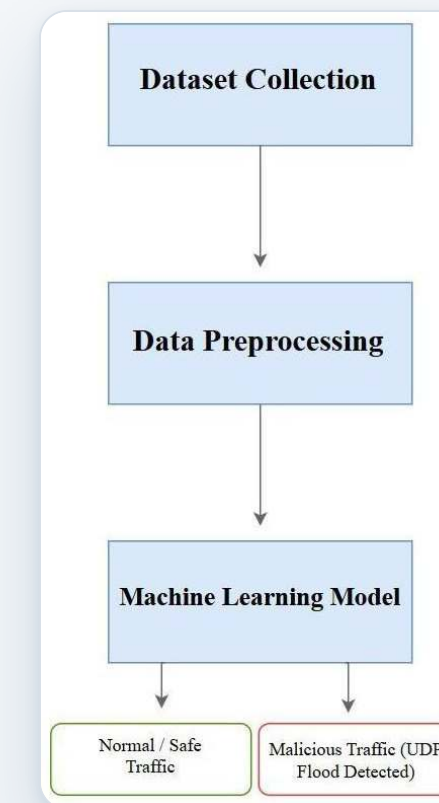
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Detection pipeline: dataset, preprocessing, model, normal or malicious traffic

KEY FEATURES

- ◆ Separates normal traffic from UDP flood attacks
- ◆ Balances attack classes with SMOTE
- ◆ Compares four classifiers on four metrics
- ◆ Uses flow-based features from CIC IoT 2023

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UniBook

Book sharing and course information for students

A web platform where university students borrow, exchange and donate academic books and read course and instructor information.

University students often cannot tell which books a course requires, find little reliable information about courses and instructors, and pay high prices for new books each semester. There is also no organized way to pass books on after a course ends. The team surveyed 101 students from different majors while defining the requirements.

The team built UniBook, a web platform for Najran University students with an Arabic right-to-left interface. Students register, browse a book catalog, and create listings to borrow, exchange or donate a book, then send and follow requests. They also read course descriptions, instructor profiles and student reviews. Administrators manage the catalog, courses, instructors and users from a dashboard. The platform runs on PHP and MySQL under XAMPP. The report states that testing of registration, login, browsing and listing creation confirmed the core workflows.

BUILT WITH

PHP

MySQL

HTML

CSS

JavaScript

XAMPP

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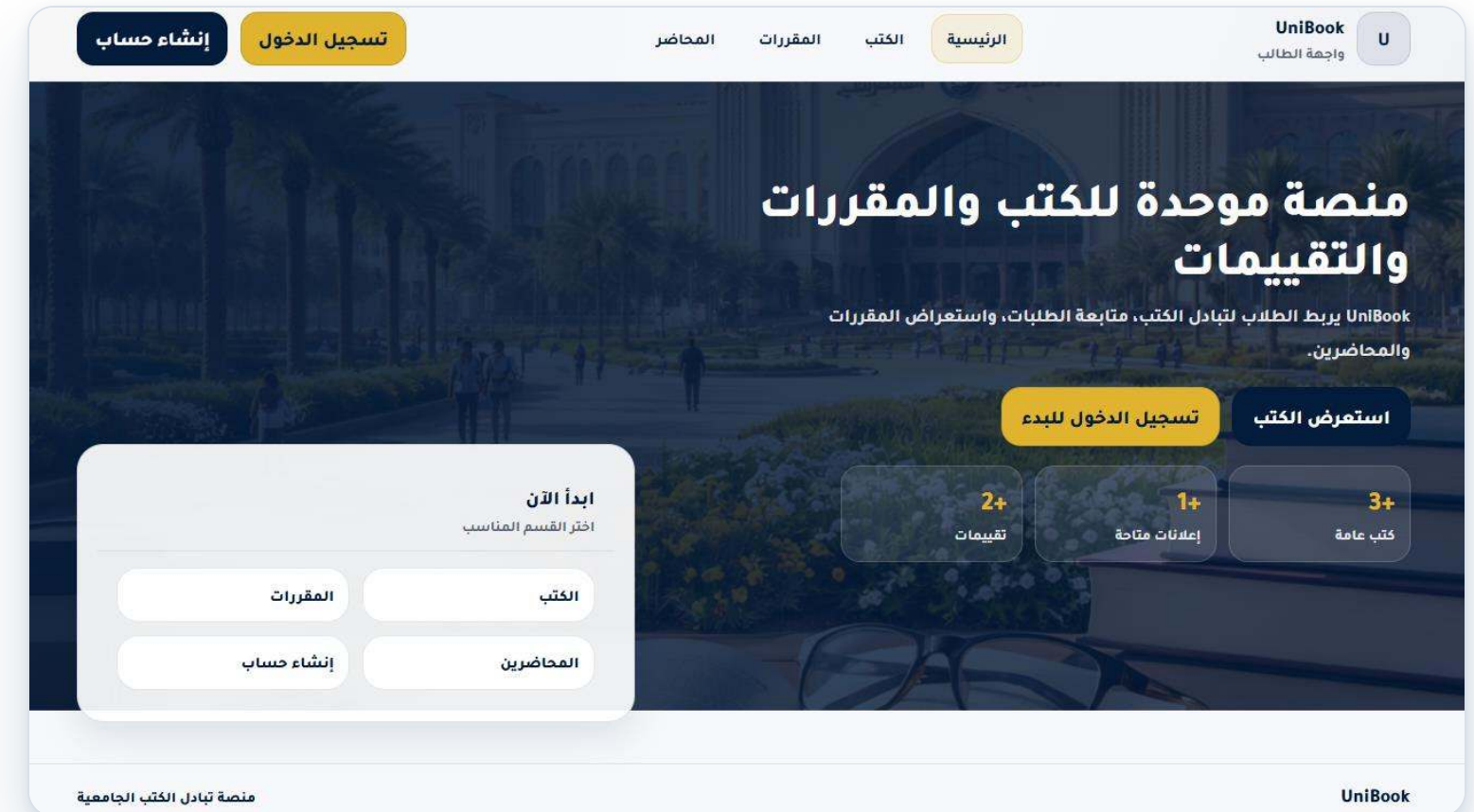
Dr. Samar Alqhtani

SERVES

University students

55

Female Campus
Second Semester



UniBook home page with book, course and instructor sections

KEY FEATURES

- ◆ Borrow, exchange or donate academic books
- ◆ Course descriptions and instructor profiles
- ◆ Student reviews of courses and instructors
- ◆ Administrator dashboard for catalog and users

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UniBus

Smart university bus transport

A Flutter and Firebase app for Najran University that handles bus attendance, notifications and complaints for students, drivers and administrators.

Bus service at Najran University relied on manual attendance, which is slow and error-prone. Administrators could not verify a bus route or see its live location, new students lacked clear information on bus numbers and gathering points, and there was no structured channel for complaints or for sending notifications to students and drivers.

The team built UniBus with Flutter, Firebase Authentication and Cloud Firestore. Students, drivers and administrators sign in with role-based accounts. Students confirm boarding by scanning QR codes and drivers confirm attendance for each student, while administrators see whether each bus driver is currently live or offline, send notifications, answer complaints, manage users and view attendance and trip reports. The report documents test cases for login, registration, role approval, password recovery, reports, complaints and live bus status, and concludes that the system functions correctly.

BUILT WITH

Flutter

Firebase Authentication

Cloud Firestore

QR code scanning

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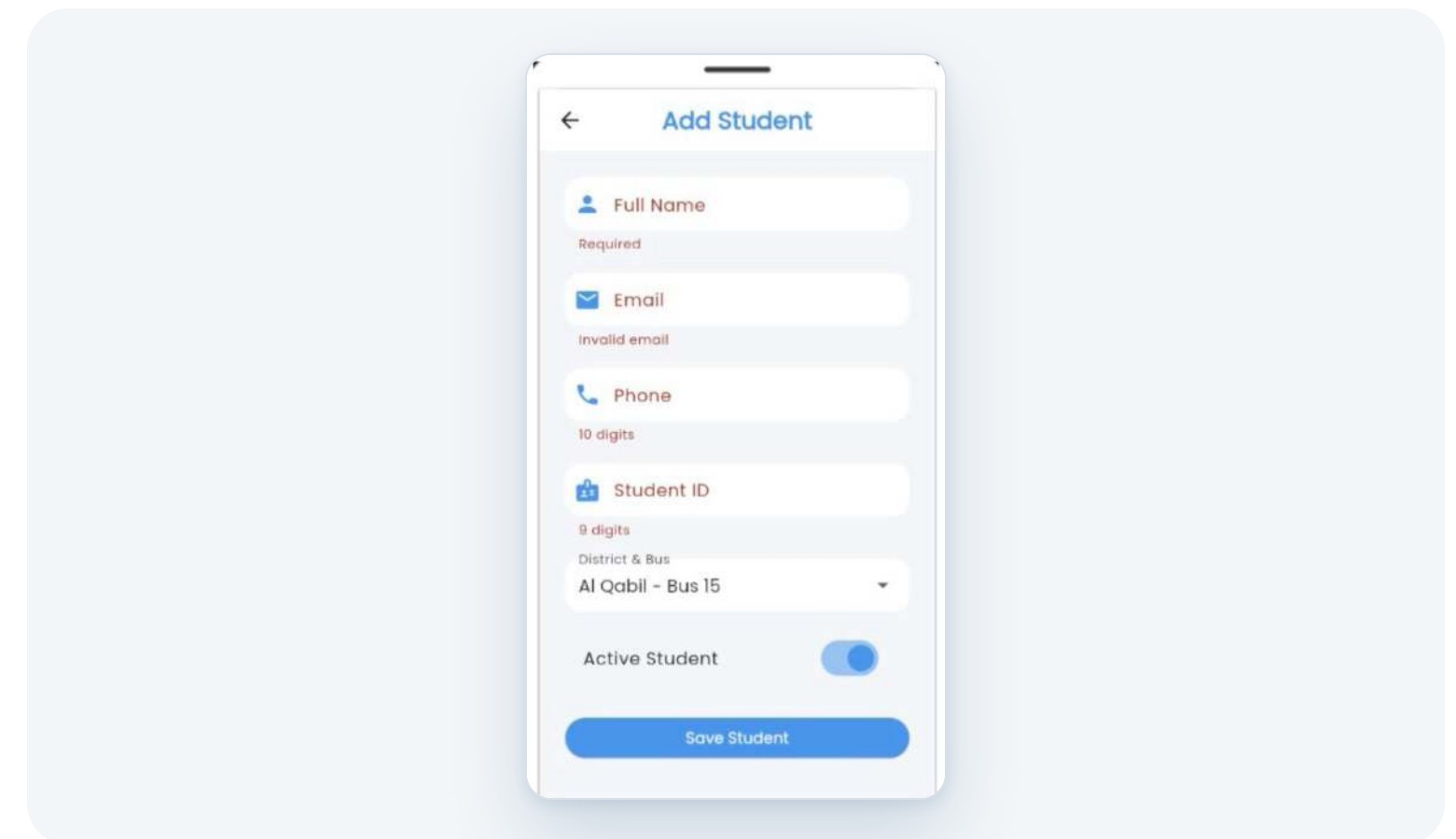
Dr. Asmaa Alrayzah

SERVES

Najran University students,
drivers and administrators

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Female Campus
Second Semester



Administrator's Add Student screen with validated fields and bus assignment

KEY FEATURES

- ◆ QR code attendance for students and drivers
- ◆ Live or offline status for each bus driver
- ◆ Notifications and complaints between users and administrators
- ◆ Daily attendance and trip reports

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UniReco

University recommendation letter management system

A web system where Najran University students request recommendation letters and recommenders review, sign and issue them electronically.

Students at Najran University who apply for graduate programs and scholarships depend on letters of recommendation, but the process runs on email, paper forms and oral requests. The team's report lists wasted time, no standard request form, no way for students to track a request, forgotten or delayed letters, and no central archive of issued letters.

The team built UniReco, a web-based recommendation letter management system written in HTML5, CSS3 and JavaScript with a MySQL database. Students submit and track requests, recommenders write letters and sign them with a signature pad, and administrators manage users. A receiving university opens completed letters from its own dashboard, and the student's dashboard then shows the letter as viewed. Logins and student academic data are checked through a university API. The report documents four test cases, covering registration, login, request submission and letter approval, with screenshots.

BUILT WITH

HTML5

CSS3

JavaScript

MySQL

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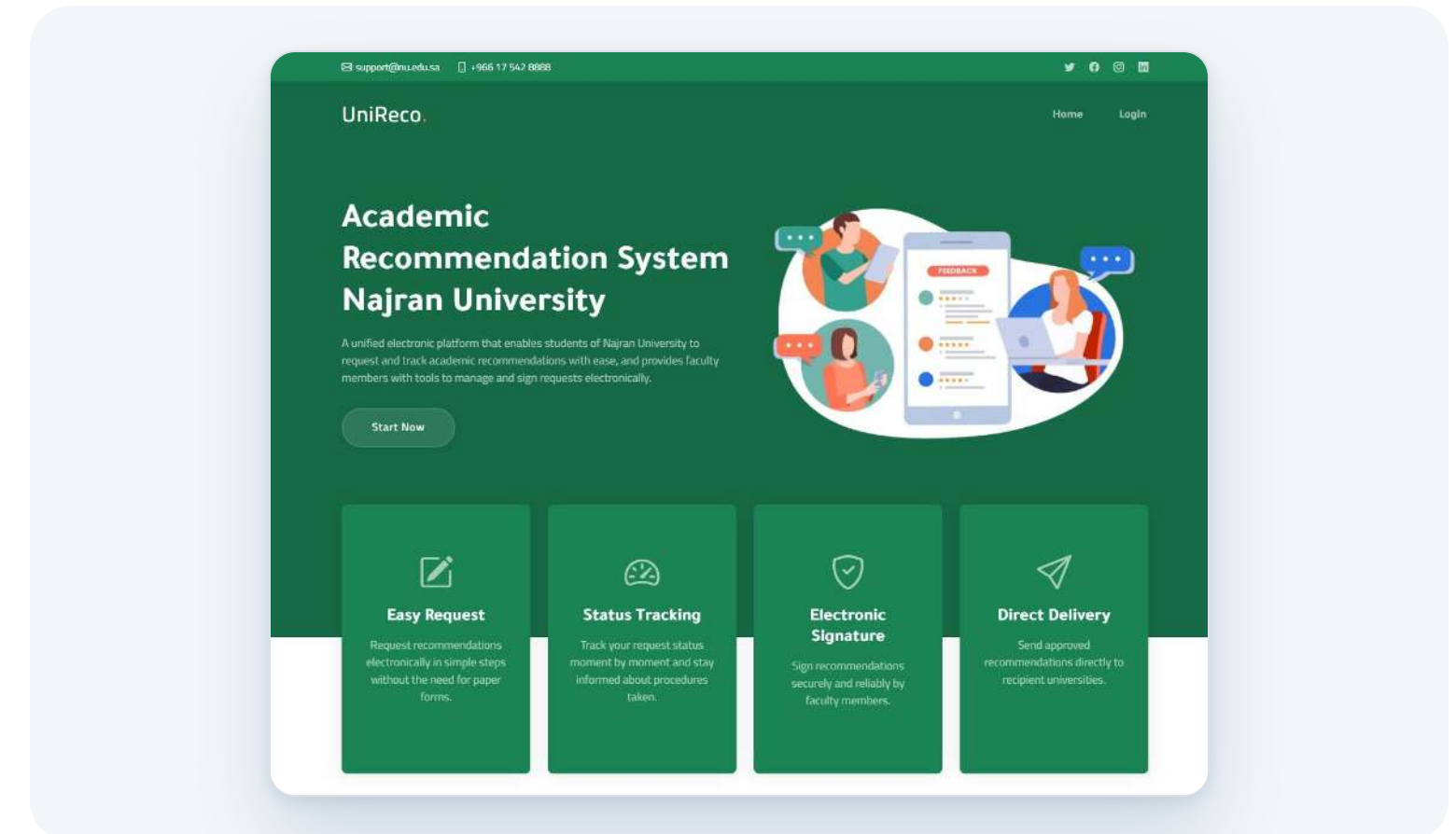
Dr. Samar Alqhtani

SERVES

Najran University students
and recommenders

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Female Campus
Second Semester



UniReco home page with request, tracking, signature and delivery features

KEY FEATURES

- ◆ Online recommendation requests with status tracking
- ◆ Electronic signing by recommenders
- ◆ Letter delivery to receiving universities
- ◆ Administrator tools for user management

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VeriNews

Fake news detection for Arabic and English text

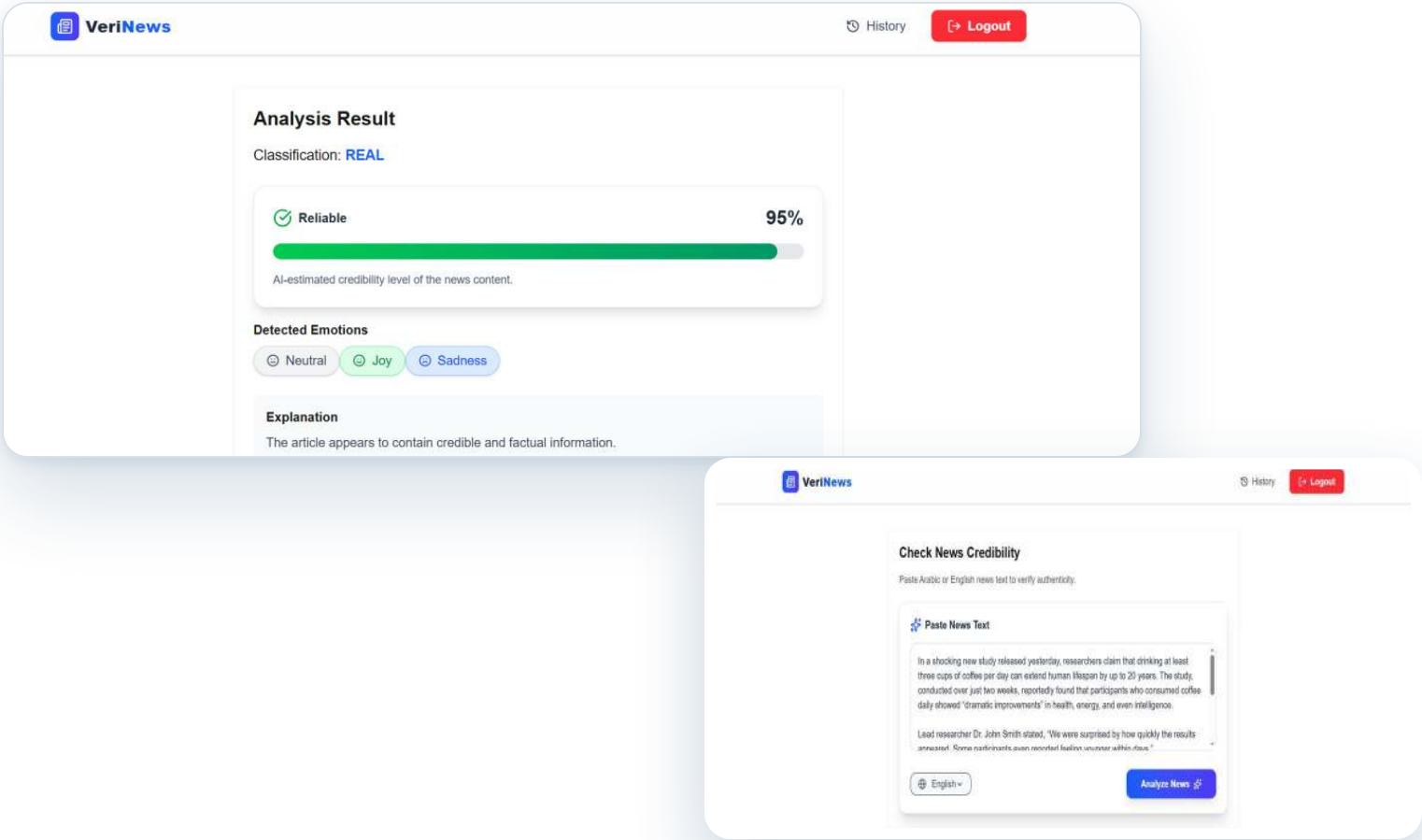
A bilingual web system that classifies pasted news text as fake, real or suspicious and gives social-media users a credibility score.

News spreads quickly across social media, and many users share items without checking them. Fake news can confuse readers and cause financial or emotional harm, and verifying claims by hand is slow. The team surveyed users about how they meet and verify news online, and used the findings to shape a tool that checks a text before it is shared.

The team built VeriNews, a web system for Arabic and English text. A user registers, pastes a news text and picks a language. English text goes to a TF-IDF and LinearSVC classifier, and Arabic text to an AraBERT model, which label it fake, real or suspicious. The result page shows a credibility score as a percentage, detected emotions and highlighted keywords. A Laravel back end with a MySQL database stores accounts and past analyses. The report states that classification completes within two to four seconds.

BUILT WITH

- Python
- AraBERT
- Transformers
- scikit-learn
- Laravel
- MySQL
- JavaScript



- 1 Analysis result with classification, credibility score and detected emotions
- 2 Page for pasting news text and choosing Arabic or English

KEY FEATURES

- ◆ Fake, real or suspicious classification of news text
- ◆ Credibility score and emotion analysis
- ◆ Separate models for Arabic and English
- ◆ Analysis history for registered users

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SERVES

Social-media users

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Female Campus
Second Semester

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