Mahdi Hadi Ammar

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Summary

Computer Engineering student with solid knowledge in Data Structures, Algorithms, Object-Oriented Programming, software development, and basic AI/Machine Learning concepts. Built projects across frontend, backend, embedded systems, robotics, and machine learning using Python libraries such as Pandas and Scikit-learn. Interested in software engineering, backend development, mobile/web applications, AI, and Machine Learning.

Education

Beirut Arab University Dibbiyeh, Lebanon
Bachelor of Computer Engineering Sep 2023 – Present

Experience

Networking Practical Knowledge

- Able to configure networks with basic practical knowledge of networking concepts and setup.

SEMICCOLON CTF Competition Participant

- Solved cybersecurity and logic challenges in a competitive problem-solving environment.

Projects

Khedne Ma3ak Flutter, Firebase, Gemini AI, Google Maps APIs

- Built "Khedne Ma3ak" — a Flutter app to discover places in Lebanon.
- Developed smart place discovery for restaurants, beaches, pools, hotels, and activities.
- Integrated Google Maps and Places APIs with improved place accuracy.
- Added social features including friends, events, join requests, and event chat.
- Implemented contribution flows for submitting locations, reviews/suggestions, and booking requests.
- Integrated an AI assistant powered by Gemini.
- Technologies used: Flutter (Dart), Firebase Auth, Cloud Firestore, Cloud Functions, Riverpod, go_router, Google Maps/Places APIs.
- Improved skills in software architecture, state management, API integration, and UI/UX iteration throughout development.
- GitHub: Repository Link

Cross-Platform Football App React Native, Expo, Node.js, PostgreSQL, SQL

- Building a cross-platform football app to make it easier to find and organize football matches with real match flow.
- Implemented match creation by format including 5v5, 6v6, 7v7, 8v8, and 11v11.
- Designed join-request flow where players select their team and exact position on the field, with host approval or rejection.
- Added live participant management so hosts can remove players and players can leave matches dynamically.
- Built match-specific chat accessible only to the host and accepted players.
- Completed the app-side flow for both web and mobile using React Native and Expo, and currently migrating from Firebase to a custom Node.js + PostgreSQL backend for better data control and scalability.

Student Grade Prediction System Python, Pandas, Scikit-learn, Jupyter Notebook

- Developed machine learning models to predict student grades using educational dataset analysis.
- Implemented Linear Regression and Random Forest Regression models for performance prediction.
- Performed data preprocessing, feature handling, model training, and evaluation using Python.
- Technologies used: Pandas, NumPy, Scikit-learn, Matplotlib, and Jupyter Notebook.

Front-End Development: Bakery Menu HTML, CSS, JavaScript

- Developed a responsive multi-page bakery menu using HTML, CSS, and JavaScript.
- Applied structured UI design principles and responsive layouts.

Front-End Development: Tic-Tac-Toe & Blackjack JavaScript, OOP

- Developed interactive games using JavaScript and Object-Oriented Programming.
- Implemented game logic, user interaction, and score tracking.

Snake Game C

- Developed the Snake Game using C programming.
- Implemented snake movement, food generation, and collision detection.
- Focused on efficient memory management and real-time gameplay.

Student Attendance Management & Gym System C, C++

- Designed and developed a Student Attendance Management System and Gym Management System using C/C++.
- Implemented features such as account registration, attendance tracking, and session management.
- Focused on efficient data handling and user interaction.

Firefighting Robot Raspberry Pi 4, Python, OpenCV

Sep 2025 – Dec 2025

- Built a robot with remote control and automated fire detection using image processing.
- Technologies used: Python, OpenCV, Raspberry Pi GPIO, Image Processing.

Skills

Programming Languages: C, C++, Java, Python, JavaScript, SQL, Assembly

Frontend & Mobile: React Native, Expo, Flutter, HTML, CSS, JavaScript, Responsive UI Design

Backend & Databases: Node.js, PostgreSQL, Firebase, SQL, Backend API Design

Software Concepts: Object-Oriented Programming, Data Structures, Algorithms, Problem Solving, AI/ML Fundamentals, Data Analysis

Embedded & Digital Systems: Microcontrollers, PCB Design, Logic Design, VHDL, FPGA Fundamentals

Tools: Git, GitHub, VS Code, MATLAB, Proteus, Quartus, Eclipse, Jupyter Notebook

Libraries & Frameworks: Pandas, NumPy, Scikit-learn, Matplotlib

Soft Skills: Critical Thinking, Problem Solving, Analysis, Working Under Pressure, Time Management

Relevant Coursework

Artificial Intelligence, Machine Learning, Data Structures & Algorithms, Object-Oriented Programming, Database Systems, Computer Architecture, Digital Signal Processing, Digital Electronics

Languages

Arabic: Native

English: Fluent