portfolio

Omar Abu Abbass

@oabuabbas

omarabuabbass

Amman / Irbid

omarabuabbas99@gmail.com

Winter 2026 Edition

introduction

Hello, I'm Omar Abu Abbass

I am a Fourth-year Internet of Things (IoT) student driven by the challenge of connecting the physical world with digital intelligence. My focus is on building end-to-end smart systems that solve real-world problems through innovation and scalable design.

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introduction

"Proficient in integrating embedded hardware like ESP32 and Arduino with Cloud platforms and Mobile Applications using Flutter. I specialize in developing Machine Learning pipelines and robotics prototyping to deliver high-performance IoT solutions.

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my education

I am currently focused on expanding my technical versatility through self-training and academic research. My goal is to bridge the gap between complex IoT hardware and interactive user interfaces, ensuring seamless connectivity and high-level software integration across various digital platforms.

Jadara University

Bachelor of Internet of Things sciences (IoT). Specialist coursework in embedded systems, network architecture, and smart environment integration. (Expected Graduation: 2026).

Advanced Coursework

Deeply engaged in Neural Networks and Deep Learning research, Linear Algebra for AI, and UI/UX Evaluation. Applying theoretical models to solve real-world hardware and software challenges.

Development Initiatives

Collaborated on mobile and game development projects, including 'TAM' and 'KHAMEN'. Focused on project architecture and cross-platform logic to build scalable software solutions.

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personal skills

Beyond technical coding, I possess a strong set of analytical and collaborative skills developed through rigorous academic research and complex project management. I thrive in fast-paced environments that require adaptability, fast learning, and precise technical documentation.

- **Problem Solving**

Expertise in analytical thinking and scientific research, applying the Perception-Cognition-Action cycle to translate environmental data into real-time safety decisions.

- **Teamwork & Adaptability**

Strong collaborator with excellent time management skills. Capable of leading technical initiatives and adapting quickly to new tools and methodologies in diverse environments.

- **Technical Reporting**

Proficient in technical reporting and documentation. I combine this with a creative eye for photography and videography to present technical projects in an engaging, professional manner.

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technical skills

A comprehensive overview of the programming languages, frameworks, and hardware technologies I utilize to build integrated IoT solutions and intelligent software systems.

- **Programming Languages**

Python, C/C++, Java, Dart & Flutter, SQL.

- **IoT & Embedded Systems**

ESP32, Arduino, MQTT/HTTP Protocols, Sensor Integration, Circuit Prototyping.

- **AI & Data Science**

TensorFlow, Keras, Scikit-learn, Pandas, NumPy, Data Visualization.

- **Tools & Platforms**

Git/GitHub, VS Code, Google Colab, Firebase, Arduino IDE.

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work experience

Proven track record in architecting end-to-end IoT systems and cross-platform applications. Focused on bridging the gap between hardware precision and scalable software logic.

- **Embedded Systems Prototyping**

Developed smart safety systems (ARGUS/AEGIS) integrating ESP32/Arduino with MQTT protocols and Cloud backends.

- **AI & Research Contributions**

Designed ML pipelines for real estate price prediction (DPP.Dx44), specializing in data visualization and feature interpretability.

- **Mobile Development Initiative**

Engineered cross-platform apps (TAM/KHAMEN) using Flutter, focusing on UI/UX optimization and scalable project architecture.

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project portfolio

A curated showcase of my technical journey, featuring a diverse range of projects from smart IoT safety systems and AI-driven research to interactive mobile applications. Each project represents a unique challenge where I integrated hardware precision with modern software logic to deliver functional, scalable, and real-world solutions.

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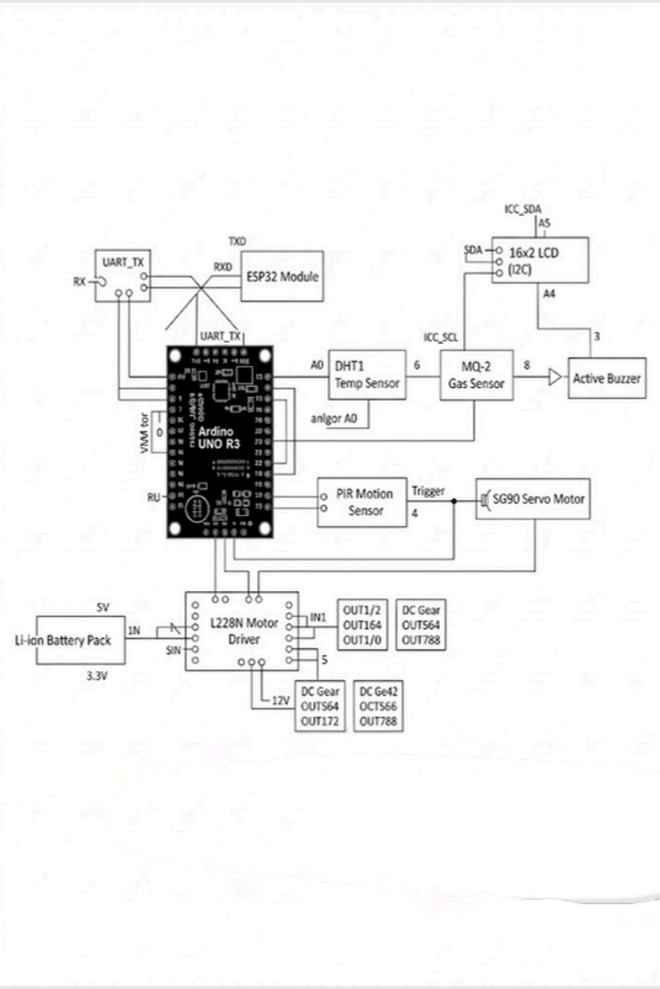
first project

EnviroBot Explorer is an autonomous robotic prototype engineered for advanced environmental monitoring. By leveraging the Robotic Perception-Cognition-Action cycle, the system translates raw sensor data into real-time navigational and safety decisions, showcasing a seamless integration of hardware control and intelligent logic.



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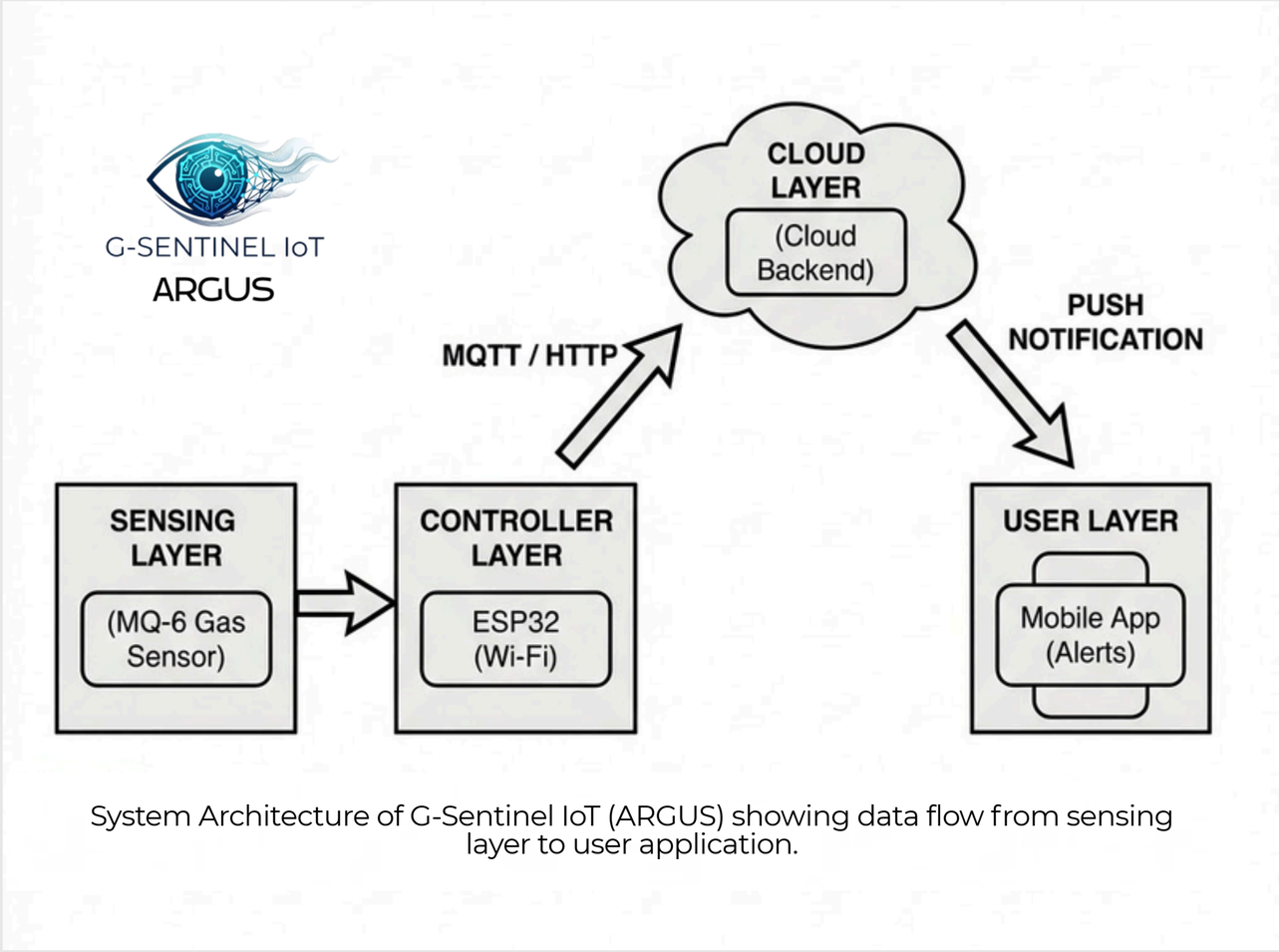
second project

ARGUS (G-Sentinel) is a robust, end-to-end IoT safety solution designed for real-time hazardous gas monitoring. This system bridges the gap between physical sensors and digital interfaces, utilizing ESP32 to transmit environmental data to a Cloud backend, with instant push notifications delivered to a custom-built Mobile App via MQTT protocols.



System Architecture of G-Sentinel IoT (ARGUS) showing data flow from sensing layer to user application.

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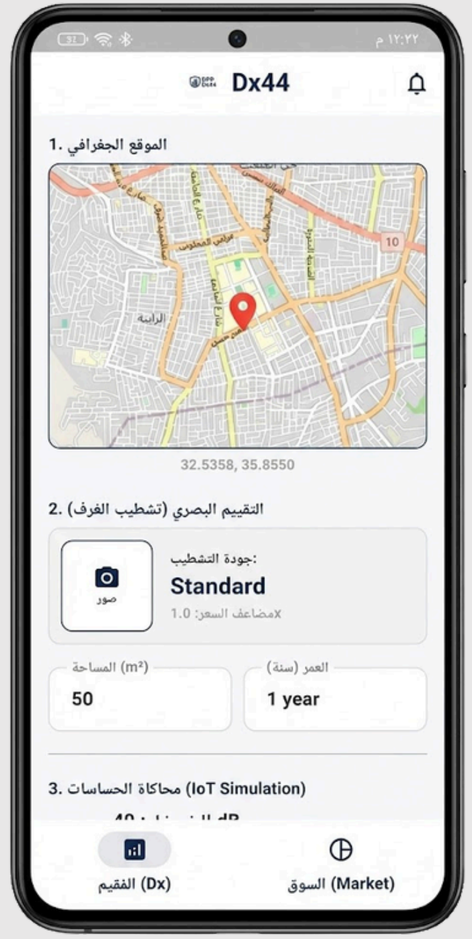
third project

DPP.Dx44 is an interpretability-focused price predictor and a specialized research project centered on developing a high-precision model for real estate analysis. The project successfully addressed complex data challenges, such as multicollinearity in a 500-unit dataset, by utilizing Lasso Regression to effectively isolate structural value from market noise.



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other PROJECTS

A collection of ongoing and completed initiatives that highlight my versatility in mobile app development and embedded logic. From interactive party games to advanced urban price predictors, these projects represent my commitment to continuous learning and building functional digital experiences.

*Application Snapshots

AEGIS
THE SHIELD OF SAFETY

DONE.

ROAD TO 2026

IN PROGRESS...

TAM

ALMOSTLY DONE

KHAMEN

ALMOSTLY DONE
LIVE ON LINK

UPP.Ux55
Urban Price Predictor
– Code U.x55

IN PROGRESS...

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Amman / Irbid

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Junior Developer & IoT Specialist

FINAL

thank you

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