

LOUAY BARRAQ

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EDUCATION

Higher Institute of Computer Science (ISI Ariana) <i>Software Engineering Degree – Software Development Engineering (IDL)</i>	2025 – 2028 <i>Ariana, Tunisia</i>
Higher Institute of Information and Communication Technologies <i>Bachelor's in Computer Science – IoT & Embedded Systems With High Distinction</i>	2022 – 2025 <i>Borj Cedria, Tunisia</i>
Lycee Rue de Pacha <i>Baccalaureate in Mathematics With Distinction</i>	2021 – 2022 <i>Tunis, Tunisia</i>

PROFESSIONAL EXPERIENCE

Graines Academy <i>Robotics Developer (Final Year Project)</i>	Feb. 2025 – May 2025 <i>Tunisia – Hybrid</i>
- Developed an autonomous food waste reduction robot integrating ROS, OpenCV, and TensorFlow for autonomous navigation and real-time organic waste detection. - Designed and integrated a Flutter mobile application to remotely control the robot and visualize sensor data via MQTT and Firebase.	
ISTIC & University of Aizu (Japan) <i>Mobile Developer (Internship)</i>	Jul. 2024 – Aug. 2024 <i>Tunisia – Japan</i>
- Co-developed a cross-platform mobile application (10 screens) integrating real-time university management and IoT monitoring of environmental sensors via Firebase. - Handled the full development cycle: architecture design, UI/UX development, Firebase Realtime Database integration, and end-to-end testing.	

PROJECTS

Excellent Training <i>React, Spring Boot, Java, MySQL, JWT, Spring Security</i>	2025 – 2026
- Built a fullstack web application for training management for a real client (Green Building), replacing a manual process with a centralized platform for tracking sessions, trainers, and participants. - Designed and implemented a JWT-secured REST API handling 3 distinct roles (Administrator, Manager, User) and over 15 endpoints, delivered with full UML documentation (9 entities, 7 sequence diagrams).	
MonoLedger <i>Flutter, Supabase, flutter_bloc, PostgreSQL, go_router</i>	2025 – 2026
- Developed a real-time multiplayer mobile app replacing paper money in board games (Monopoly, Game of Life) with a digital ledger synchronized across all players. - Implemented 6-character code or QR joinable sessions, swipe-to-confirm transfers, and a shared transaction history, with a clean architecture (flutter_bloc, Supabase RLS).	
Diwenek <i>Flutter, Dart, Gemini API, AI Vision, SharedPreferences</i>	2025 – 2026
- Built an Arabic poetry preservation mobile app leveraging AI (Gemini Vision) to automatically extract verses from images and videos (including TikTok links) and transform them into elegant, customizable typographic cards. - Implemented a smart layout engine that does automatic alignment, with premium Arabic font selection, personal collection management, and high-quality export to social media.	
SmartQueue <i>ESP32, Firebase, C++, Flutter</i>	2024 – 2025
Designed and developed a cyber-physical queue management system for ISI's table tennis tables, combining an ESP32 microcontroller synchronized via Firebase and a Flutter app allowing students to book tables and track their position in real time, with two unsupervised learning models estimating wait time and the best opponent to play against.	

TECHNICAL SKILLS

Languages: Python, Dart, Java, JavaScript, C/C++, SQL, VHDL
Frameworks & Libraries: Flutter, React, Spring Boot, Flask, Django, TensorFlow, OpenCV, Pandas, NumPy, PyQt6
Databases & Cloud: Firebase, Supabase, MySQL, PostgreSQL, SQLite
Tools: Git, GitHub, Android Studio, IntelliJ, DBeaver, Figma, ROS, MQTT, Maven, MATLAB, Cisco Packet Tracer

CERTIFICATIONS

Big Data Engineer Certificate – IBM	Apr. 2025
Data Analytics Essentials – Cisco Networking Academy	Nov. 2025
Scrum Fundamentals Certified (SFC) – SCRUMstudy	May 2024

LANGUAGES

Arabic: Native **French:** Fluent **English:** Fluent (C2 Proficient – EF SET)