ALEXANDRE MARMEN

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Web Portfolio: https://portfolio-m4rmens-projects.vercel.app/

TECHNICAL SKILLS

Programming Languages	TypeScript, JavaScript, C, C++, Python, Java
Protocols & APIs	XML, JSON, SOAP, REST
Databases	NoSQL, MySQL, PostgreSQL, Microsoft SQL
Frameworks	React, Angular, Node.js, Next.js, Express
Tools	AWS Cloud, MITRE ATT&CK, Docker

EXPERIENCE

Ultrapark Science and Technology Center May 2024 - August 2024
Web Software Developer — Intern *Costa Rica*

- Designed and developed a user registration system to simplify and speed up gym enrollment processes.
- Created intuitive user interfaces for both mobile and desktop platforms using ReactJS & NodeJS.
- Developed a solution that significantly reduced human errors related to data transcription.
- Built a containerized server with MSSQL normalized databases using Docker.
- Collaborated with stakeholders to identify functional and legal requirements for user registration.

Final Project, Polytechnique Montréal - Alta Robotics January 2025 - May 2025
Distributed System Developer *Montréal, QC*

- Developed a web application for irrigation management integrated with an IoT sensor to optimize water and nutrient usage in the agricultural sector.
- Implemented key features such as connecting to the sensor via WiFi or Bluetooth, collecting and displaying data (humidity, pH, nutrients), and reporting.
- Designed monthly and annual reports on agricultural resource usage, including water and fertilizer consumption.
- Used Angular for the frontend and NestJS for the backend, with a NoSQL MongoDB database for managing sensor and user data.
- Collaborated with agritech experts to address specific farmer needs, while integrating technical constraints such as solar power for the sensors.

PolyHacks Hackathon - Polytechnique Montréal February 2024
Fullstack Developer — Participant *Montréal, QC*

- Designed a prototype web application within 24 hours, enabling users to share composting resources with garden owners.
- Demonstrated dynamic and effective team collaboration, with optimized code management using Git.
- Leveraged modern technologies: Angular, TypeScript, NodeJS, MongoDB, ensuring performance and reliability for the prototype.

EDUCATION

Polytechnique Montréal, Montréal *May 2025*
Bachelor's in Computer Engineering
Specialization in Security and IT Mobility