ALEXANDRE MARMEN

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Web portfolio: https://portfolio-git-main-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 & Runtime Env.	React, Angular, Next.js, Express, NodeJS

EXPERIENCE

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

· Designed and developed a user registration system to streamline gym membership processes
· Created intuitive and **responsive** mobile/desktop web app using **React** with **component optimization** and **SOLID** principles
· Developed a **NodeJS backend server** with an **Express** RESTful API
· Implemented and designed containerized **MSSQL database server** using **Docker**
· Collaborated with stakeholders on legal/functional requirements

Polytechnique Montréal, Commercial Project - Alta Robotics   January 2025 - May 2025
Distributed Systems Developer   *Montréal, QC*

· Developed a **fullstack** application for agricultural irrigation optimization
· Designed a **MongoDB normalized DB** and a **NestJS RESTful API** for data fetching running on **NodeJS server**
· Client side PDF generation with dynamic data with **ChartJS** on monthly/annual reports
· Developed a **responsive Angular** client with intuitive **UI/UX** thanks to solid **HTML & CSS** knowledge
· Created a **Python** data simulation server, implemented **containerization** with **Docker**

PolyHacks Hackathon 2025 — 2nd Place   February 2025
Fullstack Developer – Participant   *Montréal, QC*

· Developed **sustainability-focused** educational web application with **AI** features within 24 hours
· Integrated **real-time feedback** system and **chatbot** using **machine learning APIs**
· Implemented **3D visualizations** using **Three.js** for enhanced user engagement
· Leveraged **Angular**, **Node.js**, and **RESTful API** for **full-stack development**
· Earned **2nd place** among 50+ competing teams; **click here to see the project**

AWS Microservice System   September 2024 - December 2024
Developer   *Montréal, QC*

· Designed and deployed a secure network architecture using **Amazon VPC** with **private subnets**, **Security Groups**, and **NACLs** enforcing **least-privilege** segmentation.
· Implemented **continuous compliance auditing** with **AWS Config** and automated **vulnerability scanning** via **Amazon Inspector v2**, delivering actionable remediation guidance.
· Enforced strict **access controls** using **IAM Access Analyzer** to audit and remove unused roles and keys, ensuring granular permission management.
· Leveraged the **AWS Nitro** platform for **EC2 hardware isolation**, reducing hypervisor attack surface and optimizing instance performance.

EDUCATION

Polytechnique Montréal, Montréal   *August 2020 - May 2025*
Bachelor's Degree in Computer Engineering
Concentration in Security and Mobile Computing