Marcelo Lopes

Experience

Software Developer

Sault Ste. Marie, ON

- Led migration from legacy PHP to TypeScript + React/Next.js, cutting average Total Page Load Time from 4s \rightarrow 1s ($\approx 4 \times$ faster).
- Wrote unit and end-to-end tests using Jest and Playwright, reducing production errors by over 90%
- Designed CI/CD pipelines with GitHub Actions and implemented Blue-Green Deployment to ensure zero-downtime releases.
- Optimized MySQL queries with indexes, improving query performance by $\approx 81\%$
- Built infrastructure with Ubuntu, Nginx, Node.js, PM2, ensuring reliability and secure deployments.

Sault College Oct 2023 – Sept 2024

Data Analysis Assistant

Sault Ste. Marie, ON

- Collected and analyzed student success data to design initiatives that increased retention.
- Built Python data pipeline (Pandas, Matplotlib, Seaborn) for real-time reporting and insights.
- Conducted presentations for new students to improve engagement.
- Delivered a project *Timetables Analysis* that reached the College President, providing actionable insights into scheduling efficiency.

Education

Sault College Sep 2023 – Apr 2025

Diploma in Computer Programming

Sault Ste. Marie, Ontario

Projects

Python | FastAPI | OpenAI | LLM | LangChain

- $\bullet \ \ {\rm Developed} \ \ {\rm a} \ \ {\rm Resume} \ \ {\rm Parser} \ \ {\rm API} \ \ {\rm that} \ \ {\rm converts} \ \ {\rm PDF/DOCX} \ \ {\rm resumes} \ \ {\rm into} \ \ {\rm structured} \ \ {\rm JSON}.$
- Integrated MarkItDown for text extraction and OpenAI LLMs for schema normalization.
- Implemented API key authentication, CORS support, and uniform error handling.
- Published comprehensive OpenAPI/Swagger docs with typed responses and examples.
- Added performance metrics (tokens, response times) for monitoring and optimization.

Java | Spring Boot | PostgreSQL | Swagger

- Built a production-grade URL shortener API, following SDLC practices.
- Integrated PostgreSQL for efficient storage and retrieval of links.
- · Conducted testing with Postman and used Git-based version control for team workflows.

Medium2MD | ⊕ Website | ♠ Source Code

Next.js | TypeScript | ShadcnUI | Tailwind CSS

- Developed an open-source React-based tool to convert Medium articles into Markdown.
- Built a clean, user-friendly UI using Next. is and Tailwind CSS, following component reusability.
- Applied robust error handling and modular design, ensuring scalability and maintainability.

Technical Skills

Programming Languages: TypeScript/Javascript, Python, Java, , Kotlin, Swift, SQL (PostgreSQL, MySQL, SQL Server), HTML5/CSS

Frameworks & Tools: React, Next.js, Tailwind CSS, Spring Boot, Express.js, Docker, Git, Nginx, PM2, Supabase

Additional Tools: Stripe, Vercel, Render, JUnit, Postman

Version Control & Collaboration: Git, GitHub Actions, Code Reviews, Agile

Certifications & Additional Experience

- Data Camp Data Analysis with Python (2023)
- Meta Front-End Developer (2024)
- OpenJS Node.js Application Developer (In Progress)