Siddharth Nair

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EXPERIENCE

Software Engineer   Sept 2023 – Present
Interax Group   *Toronto, Canada*

- Built a multi-tenant, domain-based inventory management platform with strict data isolation, supporting **enterprise clients** in regulated industries such as healthcare.
- Modernized a legacy document control system to Blazor WASM and .NET, enabling management of **100,000+ controlled documents** and improving page load times by **40%**.
- Developed a licensing engine supporting both seated and concurrent models, with RSA key validation and FIFO queuing, scaling to **500+ active users** without service disruption.
- Created a backend service for real-time DOCX/XLSX to interactive PDF conversion, reducing processing from minutes to **under 5 seconds** and enabling **mobile-first access** for 2,000+ field staff.
- Implemented a domain-based authorization framework and integrated **SAML 2.0 SSO**, ensuring compliance with enterprise identity standards and reducing login-related support tickets by **30%**.

Web Developer Intern   May 2022 – Aug 2022
FlowUp   *Ahmedabad, India*

- Migrated a legacy PHP/JQuery codebase to React and Node.js, improving performance and boosting agent satisfaction.
- Built a full-stack app (React, Node.js, MySQL) for tracking and purchasing 100+ cryptocurrencies with multi-wallet support.
- Redesigned the agent dashboard with JsSIP and WebRTC, automating call matching and enhancing customer communications.
- Improved service delivery by adding advanced agent-matching logic, reducing wait times by **14%**.

PROJECTS

Monolith AI Assistant | *FastAPI, Next.js, PostgreSQL, Celery, Haystack, Qdrant, Docker*

- Built a secure, multi-stage RAG pipeline in Haystack with ACL-aware retrieval, dynamic query expansion, and just-in-time content decryption so answers respect document permissions.
- Improved answer quality with hybrid retrieval (dense embeddings in Qdrant plus BM25), cross-encoder reranking, and citation grounding with chunk windowing; added prompt templates and caching to control latency and token cost.
- Implemented a multi-tenant backend with FastAPI, Celery, and PostgreSQL, using tiered asynchronous queues that classify documents by size to keep throughput high and memory usage safe.
- Shipped organization and user management with Clerk, a secure folder-based document library, and **40+ REST** endpoints, including a real-time streaming AI chat interface.

AutoGrader | *Java, React, Node.js, MongoDB, Spring Boot, Google Cloud*

- Built a web-based autograding system that streamlines student submissions and gives instructors robust assignment tracking.
- Integrated Judge0 for fast compile-and-run across **4** languages, and used ANTLR4 with Spring Boot to detect plagiarism by comparing against prior submissions and generating IDF–cosine similarity reports.

EDUCATION

Algoma University   September 2019 – May 2023
Bachelor of Computer Science (Honours)   *ON, Canada*

- GPA: 3.9/4

TECHNICAL SKILLS

Languages: C#, TypeScript, Java, JavaScript, Python, SQL
Technologies: .NET Core, React, Next.js, Node.js, FastAPI, Spring Boot, Blazor, PostgreSQL, MongoDB, Redis, Qdrant, Docker, Celery, Haystack, WebRTC, SAML 2.0, Git