VIVIAN LUDRICK

(Fourth Year, Computer Engineering)

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Career Objective

Aspiring computer engineer with a strong foundation in web development and a passion for creating user-centric applications. Seeking to leverage my skills in modern web technologies, programming, and problem-solving to contribute to innovative projects and the growth of a forward-thinking organisation.

Skills

Programming Languages: Go, Java, Javascript, Bash (Basic), Python (Basic)
Technologies: Next, React, Svelte, Tailwind CSS, Typescript, PostgreSQL, Make
Tools: Git, Github, Docker, Kubernetes, Ansible, Linux, Neovim, tmux

Training

Software Intern, Modern Solutions Hub – HomeoGenie Platform *(Dec 2023 – May 2024)*

- Developed healthcare platform using React, Next.js, TypeScript with micro-frontend architecture and Module Federation
- Configured monorepo with pnpm workspaces and TurboRepo for optimized code sharing across multiple dashboards
- Implemented frontend features and debugged Flask REST API with SQLAlchemy ORM
- Containerized deployment using Docker and MakeFiles

Education

Bachelor of Engineering in Computer Engineering *(2022)*
8.41 CGPA • Fr. Conceicao Rodrigues College of Engineering, Bandra

High School Certificate in Computer Engineering *(2020)*
84.5% • Narayana Junior College, Nalasopara

Secondary School Certificate *(2019)*
93.8% • Holy Cross Convent School, Nanbhat - Nalasopara

Projects

CRISPR Guide RNA Search

- Architected distributed system with **Rust** backend, Python ML scoring models, and **PHP** frontend for high-throughput gRNA analysis
- Implemented concurrent pattern matching using segmented FASTA files, work-stealing threads, and **SQLite** queue management
- Developed 2-bit/4-bit sequence encoding with XOR-based mismatch detection and batch processing for MIT/CFD/Doench scoring

HTTP Server From Scratch

- Built **HTTP/1.1** server in Go from scratch without using standard net/http package
- Implemented **trie-based routing** with wildcard support for efficient path matching
- Developed custom request/response parsing with chunk encoding and reverse proxy capabilities

Temperature Monitor

- Architected temperature monitoring system with **Go WebSockets**, **FastAPI** Lambdas and **React** frontend
- Implemented real-time data streaming, interactive charts, statistical analysis, and unit conversion
- Managed data persistence with **SQLite** and generated type-safe queries using **SQLC**

Achievements

- **First Place UI Design, Algozenith Unleashed: UI** *(2023)*
- **Second Place Competitive Coding, Algoholic 1.0** *(2023)*