Isitha Tennakoon

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EDUCATION

Simon Fraser University — Burnaby, BC
BSc. Computer Science — *Sep. 2023 – Present*
Deans Honor Roll, SFU SAT Developer, Google Developer Student Club Director of Events, IEEE SFU Secretary

EXPERIENCE

Backend Developer — Jan. 2025 – Present
ALEASAT Mission Operations Team – SFU Satellite Design Team — *Vancouver, BC*
- Implemented a Python BullMQ worker backed by Redis to handle location propagation calculations for satellites
- Designed and implemented relational database models using Prisma ORM to store user-issued commands and their execution logs, including automatic timestamps
- Wrote an OpenAPI specification defining a RESTful API for handling CRUD operations on logs, documenting schema definitions and endpoint structure

Coding Instructor and Course Designer — Jan. 2022 – Sep. 2022
Coding Pals — *Vancouver, BC*
- Designed a 9-week Intermediate Python course, developing lessons, and projects to teach programming concepts
- Maintained high retention rates by delivering engaging lessons and building student connection
- Led teams of four instructors across three classes, adapting material to match teaching styles and keep consistency
- Created an engaging classroom environment, balancing theory and hands-on activities to maintain focus and participation

PROJECTS

Timed File Transfer | *Prisma, PostgreSQL, React, S3, Redis, Express, Docker, K8S* — Apr. 2025 – May 2025
- Designed and deployed a self-hosted file transfer service utilizing Postgres and S3 to send large files between users
- Built a scalable background job system using BullMQ & Redis to handle asynchronous, time-triggered file deletions
- Wrote a file access API that uses JSON Web Tokens for authentication and to authorize CRUD operations
- Wrote a Prisma Schema for the PostgreSQL Database handling file metadata, user info, and user-file relations
- Doubled download speeds by switching to pre-signed S3 URLs for directly accessing large files from S3

Personal Website | *NextJS, React, Tailwind CSS, TypeScript* — Dec. 2024 – Jan. 2025
- Designed, developed, and deployed a responsive portfolio website using NextJS and TypeScript
- Implemented a markdown article system to parse and render website articles from standard markdown documents
- Achieved 100% Lighthouse score across performance, accessibility, and SEO metrics
- Utilized Tailwind CSS for efficient styling, enhancing the website's visual appeal

Be Square – StormHacks 2024 Best AI Hack Winner | *NodeJS, JavaScript, REST APIs* — Oct. 2024
- Developed an Adobe Express plugin that lets users make editable diagrams using natural language prompts
- Integrated GPT-4o with function calling capabilities to dynamically add, edit, and remove elements in real time
- Implemented a WebSocket connection to link server-side LLM function calls to client-side canvas functions

Fitness4All | *React, Vite, REST APIs* — Sep. 2024 – Dec. 2024
- Led a team of four developers in designing and building a fitness and nutrition assistance web application
- Integrated the Gemini API to provide intelligent recommendations and enhance user experience
- Established a CI/CD pipeline to automate testing and deployment, and ensure an efficient development workflow
- Wrote and maintained unit tests for backend functions and frontend components to ensure application reliability

TECHNICAL SKILLS

Languages: Python, SQL, JavaScript, Typescript, HTML+CSS, C, C++, R
Frameworks: OpenAPI, React, Flask, NextJS, Tailwind CSS, NodeJS, ExpressJS
Libraries: Prisma, BullMQ, NumPy, Matplotlib, Keras, Pillow, Jest, React Testing Library, AWS S3
Developer Tools: Git, Docker, Kubernetes, Postman, Redis, Linux, VS Code, Figma, GitLab, Telepresence