Tanish Shah

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TECHNICAL SKILLS

Languages: Python, JavaScript, TypeScript, HTML/CSS, Java, C, C++, Go, SQL
Frameworks: ReactJS, NextJS, Sveltekit, PostgreSQL, MongoDB, Prisma, Redis, Firebase, ExpressJS, RabbitMQ, Flask, FastAPI, pandas, NumPy, scikit-learn, Jest, JUnit, Selenium

WORK EXPERIENCE

Junior Full Stack Web Developer Co-op — Jan 2023 – Apr 2023
Health Canada
- Migrated 100% of a JavaScript application to TypeScript, for improved type safety and readability
- Utilized Jest to write comprehensive tests for React components and helper modules with 95% code coverage
- Developed a dashboard application to manage employee permissions and access to service accounts
- Implemented various REST API endpoints in NextJS to handle CRUD operations, user authentication and data exchanges to RabbitMQ queues
- Modelled SPARQL graph database schemes for employees, groups and complex hierarchical relationships
- Designed UI components based on 100% of the wireframe specifications from the business team
- Wrote simple CI/CD scripts with Gitlab to automate build/deployment steps toward the Jenkins server

PROJECTS

Quotify.AI | *Langchain, OpenAI, StabilityAI, Python, ChromaDB, Selenium*
- Created an AI-driven uploader of inspirational quotes on social media platforms
- Performed a basic ETL NLP pipeline to add vectorized quotes to ChromaDB
- Utilized prompt templates and LLM chains to generate unique quotes and images with OpenAI and StabilityAI
- Ran scheduled CRON tasks using GitHub Actions to post content to social media, with headless Selenium

Dexbooru | *TypeScript, Sveltekit, Tailwind, Postgres, Redis, Firestore, Prisma*
- Created an anime image board that allows users to distribute image-related media
- Implemented cookie-based session authentication to protect designated page routes
- Handled CRUD operations with the Prisma ORM on a Postgres database
- Built a scalable chatting feature using Firestore that can handle a 50/50 read-to-write ratio
- Optimized site load times by 75% by reducing image sizes with WebP and adding caching layers with Redis

Anime Recommender | *TypeScript, Python, React, FastAPI, nltk, pandas*
- Created a recommendation engine to produce relevant shows based on features such as synopsis and genres
- Tokenized and lemmatized 17,500 rows of synopses from a pandas dataframe using nltk
- Utilized fuzzy matching and Word2Vec algorithms to match synopsis strings with high accuracy
- Deployed the prediction algorithm on a FastAPI endpoint handler function
- Constructed a MaterialUI form in React to consume features and display recommendations

GoScrape | *Go, Colly*
- Created a concurrent web crawler for a specified domain to extract text content really quickly
- Utilized a task queue with worker threads to visit nested links on pages, in a breadth-first fashion
- Persisted accumulated content onto disk in various formats, such as txt, JSON and YAML
- Accepted command line arguments such as domain, max exploration depth and output format

Tunes.Java | *Java, Swing, JUnit*
- Created a desktop music player that can save playlists of MP3 songs
- Wrote test suites on class methods with JUnit with more than 90% code coverage
- Utilized design patterns such as SRP, Iterator and Observers to reduce coupling in the codebase
- Developed a UML diagram modelling class relationships, inheritances and packaging

EDUCATION

Simon Fraser University — Burnaby, BC
Bachelor of Science in Data Science — *Estimated Graduation: May. 2025*

Relevant Coursework:
Introduction to Software Engineering, Data Structures and Algorithms, Computational Data Science, Database Systems