Andy Zhang

778 682 4437 | @ Email | 🔗 LinkedIn | ⌂ GitHub

TECHNICAL SKILLS

Languages: C, C++, JavaScript, Python, SQL(Postgres, MySQLs), Java, R, Bash/Shell
Web Technologies: React.js, Ruby on Rails, Next.js , Node.js, Flask, HTML/CSS, Tailwind CSS
Tools/Frameworks: Git, Docker, Webpack, MongoDB, Supabase, Linux, Windows, Jira, Confluence

EDUCATION

Simon Fraser University   Jan 2023 – Jan 2027 (Expected)
Bachelor of Science
Honours in Computing Science with Minor in Statistics, 3.97 GPA

WORK EXPERIENCES

D-Wave Systems
Performance Research Intern   ⌂ [Source Code](#) | Sep 2024 – Current
- Design, refine, and maintain the core Python codebase for D-Wave Ocean (open-source software development toolkit), optimizing for scalability and performance in quantum computing applications.
- Conduct performance analysis to enhance optimization algorithms for graph embedding problems on D-Wave hardware graphs, collaborating with the APT team (Application, Performance, and Tools).
- Lead the execution, debugging, and analysis of advanced quantum processing experiments on QPUs and emulators, utilizing fast anneal technologies to accelerate performance.
- Collaborate with cross-functional research, benchmarking, and engineering teams to identify performance bottlenecks, driving improvements in quantum software scalability.

SFU MAGPIE Lab
Summer Research Intern   [Source Code On Demand](#) | May – August 2024
- Applied pair-wise logistic regression to predict tuberculosis (TB) genetic cluster memberships using metadata from 11k patients. Model published in **Microbial Genomics** , 2023.
- Conducted cluster analysis with SNP cutoff and untimed maximum likelihood phylogenetic tree construction; applied PCA and lasso for dimension reduction.
- Utilized R and Python for data cleaning, visualization, and analysis, employing machine learning techniques for quantitative predictions.

PERSONAL PROJECTS

LectureSync - StormHacks 2024
Next.js, Tailwind CSS, Vercel, APIs (OpenAI, Anthropic, Deepgram)   ⌂ [Source Code](#) | Oct 2024
- Developed an AI-driven web app under 24 hours that converts voice recordings and online videos into multilingual text summaries, with text-to-speech playback and markdown formatting.

SquadMatch
Ruby on Rails, Supabase, JavaScript, HTML/CSS, REST API, PostgreSQL.   ⌂ [Source Code](#) | Sep 2024
- Collaborating in a team of 3 to build an Agile-driven platform using Ruby on Rails, designed to connect university students for sports and social events.

ScholarSerpent Application
Python, Tkinter, ttkbootstrap, SQLite, Docker   ⌂ [Source Code](#) | May 2024
- Developed a cross-platform academic performance app using Python, Docker for deployment, and SQLite for secure, optimized data storage with personalized grade tracking and analysis.

ACTIVITIES

Open Source Development Club
Technology Coordinator   ⌂ [Source Code](#) | Current
- Resolved technical issues during project development and deployment, including server-side performance, cloud deployment, version control issues, testing and debugging.