

Woody (Wendi) Xiao

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Education

Simon Fraser University

Bachelor of Science in Computer Science

Expected Jan 2026

Burnaby, BC

Experience

Frontend developer Co-op

May 2025 – Current

SAMSUNG ELECTRONICS

Vancouver, BC

- Implemented an SSE + polling hybrid system for real-time report visualization in the Dynamic Data Exporter (DDE), reducing update latency from ~3–4 s to ~1 s.
- Improved JWT token and permission validation in Knox Asset Intelligence (KAI), resolving a production bug on the DDE page that caused first-load access failures and eliminating unexpected 404s.
- Optimized KAI DDE data APIs and React rendering with `useMemo/useCallback`, powering Highcharts charts and cutting table load time by 2–3 s.
- Refactored and extended the Knox Asset Intelligence front-end by building 10+ reusable React components and enhancing the table with nested views, dropdowns, reducing duplicate code by 10%.

Full-stack developer Co-op

Sep 2024 – Apr 2025

SEMIOS

Vancouver, BC

- Improved and maintained an real-time IoT data visualization dashboard for an agricultural farm, utilizing React, TypeScript, Node.js and postgresSQL.
- Optimized PostgreSQL queries and API routes using indexing, asynchronous processing, and Redis caching, reducing runtime from 12 seconds to 3 seconds and decreasing data fetch size by 40%.
- Improved a custom Highcharts table with memorization, eliminating lag during resize/zoom interactions.
- Implemented load balancing and clustered APIs to efficiently handle multi-core requests for real-time wind machine data, enhancing system performance by ~35%.

Software QA Co-op

Jan 2024 – May 2024

Gatekeeper Systems Inc.

Abbotsford, BC

- Enhanced a Python/Flask-based video transmission validator by implementing batch test case execution, JSON formatting, and bulk test file uploads, while resolving existing bugs.
- Refined automated testing Python scripts to calculate download speeds, Simulated requests to DVRs, and automatically check API responses, improving testing workflow efficiency and accuracy by 50%.
- Conducted graphic and frame rate testing using OpenCV and Matplotlib to identify frame loss or video quality issues in various cameras, enhancing system reliability.

Projects

Music Recommender System | *Python, Jupyter, Pandas, Scikit-learn, NLTK, Spotify API*

- Developed a music recommender using a 45 million song dataset, employing Python, Pandas, and Jupyter for data handling and analysis.
- Applied Scikit-learn for TF-IDF vectorization and cosine similarity calculations, enabling accurate matching of songs based on lyrical content.

E-Library Management System | *ASP.NET, C#, MSSQL Database, Bootstrap*

- Built a role-based system with JWT authentication, supporting Admin and Member roles using ASP.NET.
- Engineered a normalized MSSQL schema with stored procedures, optimizing data retrieval for complex queries like multi-filter book searches and user borrowing history.

Technical Skills

Languages: JavaScript/TypeScript, Python, Java, C#, PHP, HTML5, CSS, MySQL, PostgreSQL, MongoDB

Tools: VS Code, Google Cloud, AWS, Docker, Redis, Postman, Vite, Jira, Git, RESTful API

Frameworks and Libraries: React, Node.js/Express, Flask/Django, ASP.NET, Springboot, Panda, Jupyter, Highchart