Vicki Zhang

B.Sc. Computer Science + Statistics | Anticipated Graduation by 2026 @ UBC

vickiszhang@gmail.com | https://linkedin.com/in/vickiszhang | https://github.com/vickiszhang | https://vickizhang.tech

EXPERIENCE

Software Developer
Thrive Health

Sept 2024 – April 2025
Vancouver, BC

- Fixing UI components and bug fixing in a **Next.js TypeScript and Django** core application.

Full Stack Developer
Public Health Agency of Canada

May 2023 – April 2024
Remote

- Designed and implemented **Python Selenium** web scraping pipelines on **Google Cloud Platform** with **Docker containers**, automating **data collection** processes for three sub-teams.
- Developed an **API wrapper** to streamline large file submissions through Liquidfiles from external users, created a **schema validation** pipeline using **Azure Data Factory** to report status of submissions to stakeholders.
- Revamped the **user interface** of a **Django** data collection application, improving user experience by implementing error display warnings for form entries.
- Conducted **data analysis** on 1 million+ entries of COVID-19 data, developed a script to map postal codes from dissemination areas, and created **visualizations** of traveler movements during the pandemic.

AI/ML Software Engineer
Convergence Concepts Inc.

Sep. 2022 – April 2023
Vancouver, BC

- Deployed **production features** on a financial rule check application using **Python**, including an **AWS S3 bulk zip file compressor**, and **MongoDB** schema modification.
- Recognized repetitive code and shotgun surgery when creating a complete data flow of a fin-tech application, **refactored 1000+ lines** of code by implementing **Singleton pattern** for database connections, extracting classes following SRP for **feature isolation**. I standardized the use of **OOP class structure** in the AI team.
- I created **unit tests with pytest** for existing features to achieve **90% passing rates**, and **improved runtime by 30%** by removing redundant data modifications and reducing database calls.
- Independently designed and deployed a **MongoDB to SQL (Postgres) data migration project** — seamlessly handled the transfer of millions of lines of data over 20+ collections.
- Prototyped an API to extract driver's license information using **AWS Rekognition.**
- Analyzed **AWS Cloudwatch** logs to identify and report the root cause of an unusual surge in request volume, I **proposed solutions** to mitigate future occurrences such as **request rate thresholds and load balancers.**

PROJECTS & HACKATHONS

Digital Paint| *C++, OpenCV, Python*

- Built a color detection and drawing tool with OpenCV: Detected specific colors via webcam and draw on screen based on detected color positions.

Tetris | *C#, Visual Studio*

- Developed a classic Tetris game using C# and WPF framework, including block movement, rotation, collision detection, and user-friendly UI with score panel showing current score, level, and next block preview.

Wishlist | *Java, JFrame, JUnit*

- App to keep track of recent purchases and wishlist items, with total balance display and load/save functionality.

Election Guard | *MERN, JavaScript, HTML, CSS*   1st Place Education Equity - cmd-f 2024

- Integrated Cohere API with prompt-engineering to analyze news bias, truthfulness, and political standpoint.

Oniva | *MERN, JavaScript, Tailwind CSS*   YouCode 2024

- A personalized outdoor activity recommender in collaboration with Arc'teryx, I managed entire back-end server operations, including API call management to MongoDB, to provide customized activity suggestions.

Volunteer

Developer Executive   Oct. 2023 – Present

UBC Esports Association

- Maintaining club website, developed admin login feature to a real-time system to keep track of club PC room usage.

Software Developer   Oct. 2023 – August 2024

UBC Computer Science Student Society

- Collaborating with a team of students to create a full stack web application for UBC Volleyball Club.
- Implemented front-end design for home page, user login/sign-up, and payment processing using Stripe for payments.

Technical Skills

Languages: Java, C#, Python, SQL (Postgres), JavaScript/TypeScript, HTML/CSS, R, C/C++ (basic)
Frameworks: React.js, Node.js, Express.js, Flask, JUnit, WordPress, Next.js (basic), Spring (basic)
Developer Tools: Git, Docker, MongoDB, AWS, Azure, Google Cloud Platform, VS Code, Visual Studio, IntelliJ, Unity

Education

University of British Columbia   Vancouver, BC

Bachelor of Science in Computer Science + Statistics   *Sep. 2020 – 2026 (Anticipated)*