

# Lilian Pham

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## EDUCATION

### Simon Fraser University – Computer Science (BSc.)

Expected Graduation: May 2027

*Schulich Leader Scholarship of Canada*

- Awarded Canada's most prestigious STEM scholarship valued at **\$100,000** for academic excellence, leadership, and entrepreneurship. Selected out of 300,000 candidates and 1500 nominees nationally – one of two 2023 Leaders at SFU

*Shein and Aynmohamed Rajan Family Scholarship in Computer Science*

- Offered a **\$40,000** scholarship as the top female candidate entering SFU's Computer Science program

*Governor General Academic Medal of Canada*

- Recognized as the top graduating student at the bronze level (99% average)

## TECHNICAL WORK EXPERIENCE

### Software Engineer Intern

Jan. 2025 – April 2025

*Insurance Corporation of British Columbia (ICBC)*

Vancouver, B.C.

- Developed new features for ICBC's Claims applications using **React** and **JavaScript**, improving workflows for >725,000 annual claims, including a geolocation feature to help customers find their nearest licensing office using **Google APIs**
- Assisted with database upgrades by creating **PostgreSQL** queries to transfer and validate data
- Created **Jenkins** files to automate application onboarding, restarts, and updates by checking out code from **GitLab**, supporting ICBC's transition to cloud infrastructure
- Wrote **LDAP** auditing scripts using **PowerShell** to generate HTML reports to automate **Linux** group queries

### Software Developer & Project Manager

Nov. 2021 – May 2023

*FIRST Tech Robotics Team*

Vancouver, B.C.

- Spearheaded the design and programming of **C++** algorithms for robot control, leading debugging and testing to optimize performance and ensure compliance with regional competition standards
- Used Scrum **Agile** to organize sprints, maintain a prioritized backlog, manage technical documentation and version control

## TECHNICAL PROJECTS

### StorAI Teller – React, TypeScript, TailwindCSS, Python, Django, MySQL

- Full-stack AI-powered web app generating personalized children's stories and illustrations from user prompts with NLP
- Developed a **Django** backend utilizing caching and query optimization to handle multiple requests simultaneously
- Optimized image performance through compression, histogram equalization, and noise reduction while designing a scalable **SQL** database with **indexing** for < 100ms query response times
- Improved system efficiency with **multithreading**, reducing story creation latency by **40%** using parallelized text processing

### FuelWise Optimization – Python, Pandas, NumPy, MATLAB

- Developed an automated **Python** data pipeline for preprocessing, feature extraction, and model training
- Applied linear regression and unsupervised learning using **scikit-learn** to predict MPG based on vehicle parameters
- Processed datasets of 500,000+ rows using **Pandas** and **NumPy**, improving data efficiency by memory optimization

### Advanced Homework Manager – JavaScript, HTML + CSS

- Designed a system that generates a prioritized to-do list, sorting tasks by due date and assignment weight with a priority tree
- Implemented a data model that reduces memory reads by allowing grade recalculations without reading all sub-assessments

## TECHNICAL SKILLS

**Programming Languages:** Python, C/C++, Java, JavaScript, TypeScript, HTML/CSS, SQL

**Technologies:** React, MATLAB, Node.js, Flask, Django, NumPy, Pandas, Docker

**Tools & Testing:** Git/GitHub, GitLab, Jenkins, Linux, Bash, PowerShell, Agile, Jira, Liberty, Splunk

## WORK EXPERIENCE

### Program Manager | The City of Vancouver

June 2021 – May 2023

- Helped lead and support three youth programs with over 90 participants, using Power Query and Excel to improve how resources were tracked and shared

### Computer Science Peer Tutor | Simon Fraser University

Sept. 2024 – April 2025

- Tutored students in: Data Structures and Algorithms, Object-Oriented Programming, Programming in Python, C/C++