

James Pham

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Technical Skills

Programming Languages: C++, Java, Python, C

Web: HTML5, CSS, JavaScript, SQL

Technologies: Git, React, PostgreSQL, Railway, JUnit

Projects

[Thyme Saver](#) — React, HTML5, CSS, JavaScript, PostgreSQL, Railway

March 2025

- Designed and developed a **full-stack** cooking assistant web application using **React** and powered by the **Google Gemini Vision API**, delivering an **intuitive** and **dynamic** user experience
- **Deployed** the application seamlessly on **Railway**, ensuring **scalability** and **reliability**
- Enhanced security by **encrypting** user **login-credentials** with **BCrypt** and securely storing them in a **PostgreSQL** database
- Built a robust **back-end** server to handle **client requests** efficiently, ensuring smooth communication between the **front-end** and **database**

Maze Generator and Solver — C++, Raylib

April 2025

- Developed an interactive application to **generate** and **solve** mazes using multiple algorithms with **real-time** animation and performance metrics
- Implemented several **generation algorithms**, including DFS, Prim's algorithm, and Kruskal's algorithm
- Built **solver implementations** for DFS, BFS, A* Search, Greedy Best-First Search, Wall Follower (left/right hand), and Dead-End Filler
- Integrated user input for live toggling between algorithms and animated execution with **step-by-step visual feedback**

Work Experience

Barista

Dream Tea

Edmonton, AB

November 2021 – Present

- Efficiently crafted and served a wide variety of beverages in a high-volume, fast-paced environment
- Accurately handled transactions, operated the cash register, and managed the payment terminal
- Provided knowledgeable and attentive customer service, addressing inquiries about ingredients and allergen concerns

Music Instructor

Northgate Music School

Edmonton, AB

May 2018 – March 2019

- Delivered tailored musical instruction to over 200 students, fostering their growth and development in piano skills
- Effectively communicated concepts to students across diverse age groups, ensuring understanding and engagement
- Adapted teaching methods to meet the unique needs and learning styles of individual students

Volunteer Experience and Awards

Mentor

You Can Ride 2

Edmonton, AB

March 2023 - March 2023

- Volunteered as a mentor in a six-week program, assisting children with mental challenges and disabilities in building the skills and confidence to ride a bike independently
- Provided hands-on guidance, encouragement, and instruction to support their progress

Telus Friendly Future Social Impact Award

Awarded for displaying social impact initiative

Hill Top Award

Awarded for community involvement and leadership

Extracurricular Activities

Piano

Achieved Level 10 certification in the Royal Conservatory of Music (RCM) piano program, demonstrating advanced proficiency in performance, music theory, and technical skills

Volleyball

Played as a member of both school and intramural volleyball teams, demonstrating strong teamwork, leadership, and athletic skills, while consistently contributing to team success in competitive matches

Education

University of British Columbia

Bachelor of Science (Computer Science)

Vancouver, BC

*Expected Graduation:
2027*

Awards: Trek Excellence Scholarship (Top 5% GPA in undergraduate year), Dean's Scholar

UBC Science Co-op



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