Cathy Le

Computer Science Student

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EDUCATION

University of British Columbia **Expected Graduation May 2027**
Bachelor of Science in Computer Science

University of British Columbia **Graduated May 2023**
Bachelor of Applied Science with Distinction in Civil Engineering

WORK EXPERIENCE

Graham Construction & Engineering, *Vancouver, BC* **January 2022 – March 2025**
Engineer-in-Training

- Developed an automated data tracking system by creating Microsoft Excel tools with Visual Basic for Applications to streamline project documentation management, improving efficiency in record-keeping
- Created comprehensive technical documentation and reports to facilitate effective communication between internal teams and clients, ensuring alignment and smooth project execution
- Performed data analyses to extract and process information from technical drawings and contract specifications to perform resource estimation and optimize material & equipment usage
- Demonstrated strong attention to detail by conducting inspections and meticulously tracking progress to identify and address bottlenecks to ensure project milestones were met

Traylor Bros. Inc., *North Vancouver, BC* **May 2021 – August 2021**
Field Engineer Intern

- Managed and analyzed data for the Tunnel Boring Machine by monitoring progress and production trends, often generating visual graphs and charts, to make data-driven decisions and draft reports
- Processed and manipulated data logger outputs, for concrete thermal monitoring, to identify trends and create visual conclusions to optimize concrete curing processes
- Performed QA testing on operational data from the Slurry Treatment Plant, tracking changes and identifying optimization opportunities to enhance the efficiency and effectiveness of the Tunnel Boring Machine

United Lock Block LTD, *Richmond, BC* **July 2020 – December 2020**
Research and Development Co-op Student

- Developed detailed 2D and 3D visual models using AutoCAD to represent complex systems and technical solutions, enabling engineers to evaluate designs and improve system functionality
- Designed and fabricated tools and prototypes using readily available materials and 3D printing technology (Ultimaker Cura), improving workflow productivity and performance by providing innovative solutions in a timely manner

TECHNICAL PROJECTS

PrepPal, *Java* **January 2025 – March 2025**

- Applied object-orientated design principles to develop a meal planner and recipe manager application in Java, using method abstractions to simplify complex functionalities such as generating lists and plans
- Performed comprehensive testing to identify and resolve bugs using JUnit Tests, including writing and executing test cases to achieve full-code coverage, edge case testing, and to ensure functionality

Occupancy Detection ML Model, *Python* **January 2023 – April 2023**

- Designed an occupancy detection machine learning model to optimize building energy consumption by 30%, employing techniques such as data pre-processing, model training, and testing with decision trees, random forest, and artificial neural networks (ANN)
- Enhanced model performance by evaluating and refining predictive accuracy using key metrics such as F1 Score, RMSE, and accuracy, ensuring improved model robustness and predictive capabilities

TECHNICAL SKILLS

Languages: Python**,** Java**,** C, R, DrRacket, SQL, HTML/CSS
Courses: CS50: Introduction to Computer Science | Harvard, Tech Stewardship Practice Program