Cathy Le | Computer Science Student

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TECHNICAL SKILLS

Java, Python, R, DrRacket, HTML/CSS, Unity, C#

TECHNICAL PROJECTS

PrepPal, *Java* March 2025

- Applied OOP 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
- Utilized JSON for data persistence, allowing users to save and retrieve their grocery list plans, with a Swing based GUI
- 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

Personal Website & Portfolio, *CSS & HTML* January 2025

- Developed a portfolio website with dynamic galleries, downloadable files, and interactive elements such as a selection menu tab for easy navigation between sections
- Organized styles and layouts with CSS files and folder systems to maintain clarity and efficiency; integrating dynamic features such as smooth scrolling, hover effects, and animations for engaging user experience

PlaiCraft Predictive Data Analysis, *R* December 2024

- Conducted predictive analysis on the PlaiCraft dataset and produced a comprehensive report for UBC Computer Science Research to assist in the development of an AI PlaiCraft player
- Utilized Git Version Control to collaborate with team members, handling merge conflicts, ensuring code consistency, and maintaining clear commit comments for version history documentation
- Deployed data preprocessing techniques, including removing outliers and handling special case data, to prepare the dataset for creating a regression model used in the analysis

Fur-Minder, *Unity, C#, Figma* November 2024

- Collaborated in a team to develop a habit tracking application featuring goal tracking logs, scheduled reminders, and customizable themes for enhanced user personalization
- Implemented interactive character features by adding dynamic animal responses based on user inputs, allowing users to care for and keep their virtual pet happy while achieving goals, enhancing engagement and experience
- Created detailed UX/UI designs in Figma, crafting design layouts and interactive prototypes to support the team by providing design conceptualizations and streamlining the project development process

Occupancy Detection ML Model, *Python* April 2023

- Designed an occupancy detection ML model to optimize building energy consumption by 30%, using techniques such as data pre-processing, model training, and testing with decision trees, random forest, and 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

WORK EXPERIENCE

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

- Performed business analysis tasks, such as tracking labor productivity and forecasting project schedules, budget risks, and key milestones, to ensure effective project delivery and resource allocation
- Developed an automated data tracking system by creating Microsoft Excel tools to document and improve record-keeping efficiency for client-contractor communication
- Drafted comprehensive technical documentation and project specifications to maintain clear communication between internal teams and clients, ensuring project needs were documented and met

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

- Managed/analyzed data for Tunnel Boring Machine, and created visualization for data-driven decisions; identified trends to optimize concrete curing processes; performed QA testing to enhance efficiency and effectiveness

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

- Developed detailed 2D and 3D visual models using AutoCAD enabling engineers to evaluate designs and improve system functionality; designed and fabricated tools and prototypes using Ultimaker Cura

EDUCATION

Bachelor of Computer Science, *University of British Columbia* September 2024 - Current

Bachelor of Applied Science in Civil Engineering, *University of British Columbia* May 2023