Dominic Philip Alexander Leo

Major in Computer Science, 3rd Year
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Skills

Programming Languages: Python, Java, C/C++, SQL
Web Development: HTML, CSS, PHP, Javascript (acquiring), Node.js (acquiring)
Tools/Software: R, Github, Tensorflow, Jupyter, Azure, Oracle
Communication: Native English, Intermediate Chinese and French

Education

3rd Year Bachelor of Science, Computer Science Major Sep 2022–2027
University of British Columbia, Vancouver, BC

- Outstanding International Student Award (Vancouver) Oct 2022
- Rosemary Stewart and Ioan James Scholarship Aug 2023
- **Cumulative GPA: 4.00**

Work Experience

Software Intern, University of Hong Kong, Hong Kong Jul–Aug 2020

- Collaborated with professors and university students in developing software for VR glasses to enable multiplayer capabilities for use in room-scale VR.
- Used C to write code documentation and build software.
- Created flowcharts to represent the code structure.
  Technologies: C

Projects

Real Estate Database Management System Jul–Aug 2024

- Created a full-stack relational database application to be used by real-estate companies to manage listed properties
- Used Oracle, SQL, and PHP to build back-end relational database to store and query property information
- Developed a front-end web interface using HTML/CSS and Javascript for online data access
- Implemented complex queries such as nested aggregation and division to extract property data for analytical purposes
  Technologies: Oracle, SQL, HTML/CSS, Javascript

Predicting University Score Using MLR Model Jan–May 2024

- Designed and built a multiple linear regression model to predict a university's score in the *Times Higher Education* World University Rankings 2023.
- Tidied and wrangled dataset consisting of 2300 universities and 680,000 data points
- Used statistical methods such as forward selection to identify most relevant variables, and construct a predictive model to determine university's overall score.
- Applied data visualisation techniques to represent findings graphically including side-by-side boxplots, ggpairs plots, and multiple linear regression plots with interactions.
- Utilised Jupyter and Github for collaborative programming and to practise version control.
  Technologies: R, Github, Jupyter

Statistical Analysis of Bug Pokemon Sep–Dec 2023

- Used statistics to test the hypothesis that Bug-type Pokemon are weaker than non Bug-type Pokemon.
- Designed and implemented both theory-based two-sample t-test, and simulation-based bootstrapping confidence interval constructruction to conduct a hypothesis test in R.
- Applied data visualisation techniques to represent findings graphically including sample distributions, side-by-side boxplots, and bootstrap confidence interval graphs.

- Used Jupyter to document findings and write a 1400 word report.
- Utilised Github for collaborative programming and to practise version control.

Technologies: R, Github, Jupyter

UBC Degree Builder Jul–Aug 2023

- Built an object-oriented relational database in Java which included data persistence and exception handling, to help UBC students to plan their degrees.
- Developed a GUI using Swing with an intuitive user interface that implemented dropdown menus, pages, and windows.
- Applied Test Driven Development using JUnit to achieve 100% code coverage.

Technologies: Java, JUnit, Swing

Predicting a Footballer's Position Sep–Dec 2022

- Designed and built a classification model in R to predict the position of football players from a dataset of players from the 2019 Canadian Premier League.
- Implemented a k-nn classification model and used cross-validation methods to tune the prediction model.
- Used Jupyter to document findings and write a 1600 word report.
- Applied data visualisation techniques to create a confusion matrix which represented the accuracy of the classification model of 84.4%.

Technologies: R, Jupyter

Solving the Iterated Prisoner's Dilemma Sep 2021–May 2022

- Researched and conducted an investigation into the efficacy of different machine learning algorithms in solving the Iterated Prisoner's Dilemma.
- Coded both a Genetic Algorithm (GA) and Monte Carlo Tree Search algorithms in Python including preset GA strategies derived from Robert Axelrod's *Evolution of Cooperation*.
- Utilised Tkinter and data persistence methods to enable users to play against and build custom GA bots.

Technologies: Python, Tensorflow, Tkinter, Matplotlib

Volunteer Experience

VP Finance, Rotaract Club of UBC, Vancouver Sep 2023–Present

- Managed club finances and co-ordinated with university administration and club executives to plan and fund charity events.
- Researched and applied for grants and additional funding for club events.
- Employed Excel to create spreadsheets to accurately record club expenses and revenue.
- Planned and coordinated a major fundraising event *"Car Smash"* which raised $3000 CAD for the Rotary Education Fund.

Technologies: MS Office (Excel, Word)

Student Teacher, Tonbridge Community Action, UK Sep 2019–Apr 2020

- Organised and directed coding lessons for students at Royal Rise Primary School, UK.
- Taught fundamental programming practices such as debugging, functional programming, and code testing.
- Used BBC micro:bit and Robo:Bit devices as interactive tools to teach programming knowledge via the use of remote cars.

Technologies: Python

Certification

Microsoft Certified: Azure Data Fundamentals May 2024

Interests

Fencing (Tonbridge School Captain)
Monitoring global and business affairs