Victor Calbucci

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EDUCATION

University of British Columbia, Vancouver, BC

B.S. Computer Science – Expected Graduation, Dec 2026

- o **Concentrations:** Machine Learning and Software Engineering
- o **GPA:** 88.5/100   *Dean's List*
- o **Related Coursework:** Data Structures & Algorithms, Software Design, Data Science, Object-Oriented Programming, Statistics, Logic and Discrete Mathematics

TECHNICAL SKILLS

Languages: Java, Python, C, C++, JavaScript, TypeScript, R, SQL, HTML/CSS
Frameworks & Libraries: React.js, Vite, Node.js, Tensorflow, PyTorch, Numpy, Matplotlib, OpenCV
Tools & Platforms: Jupyter, GitHub, Visual Studio Code, AWS (Lambda, S3, RDS), Firebase

EXPERIENCE

Southend United FC

Machine Learning Engineer Intern, Feb 2025 – April 2025

- Developed an internal tool to process soccer match clips using computer vision, tracking player movements, game metrics, and key statistics
- Implemented CNN-based player tracking pipeline; extracted player trajectories, spatial relationships, and field coverage metrics from raw game video.
- Engineered K-means clustering model to assign team affiliations based on color histograms of player jerseys, improving classification accuracy by 90%.
- Designed and deployed modular computer vision pipeline leveraging OpenCV, Supervision, and custom metric computation tools.

PROJECTS

Video Game Player Activity Prediction Model

- Built a KNN regression model to predict player activity in video games based on age, gender, and skill level
- Conducted exploratory data analysis on 1,535 gameplay sessions from a Minecraft server, visualizing trends and omitting outliers; achieved a model accuracy of 81%
- Optimized model performance through hyperparameter tuning and cross-validation
- Utilized R (tidyverse, ggplot2, dplyr, kknn) for data processing, visualization, and model training

Java HTTP Server

- Built a lightweight HTTP/1.1 server from scratch in Java with full support for GET, POST, HEAD, DELETE, and OPTIONS methods.
- Implemented request parsing, router-based dispatching, and modular handler architecture for extensibility and maintainability.
- Designed the server to support persistent connections, gzip compression, file I/O, and full standards-compliant HTTP responses.

Earnings Report Calendar App

- Developed full-stack earnings calendar app tracking >80,000 stock records; built REST API and personalized watchlist experience for users.
- Automated data ingestion pipeline using AWS Lambda and Supabase; integrated Google Calendar API for seamless user alerts.

Personal Website

- Built a personal portfolio website (vcalbucci.com) to display projects and provide relevant information about myself
- Utilized Vite and TypeScript to make a fast and visually appealing website with unique animations
- Developed fully responsive website styling with capabilities for all screen sizes using media queries in CSS