

# Victor Calbucci

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## EDUCATION

University of British Columbia, Vancouver, BC

*Expected Graduation, May 2027*

B.S. Computer Science 3<sup>rd</sup> year

GPA: 87.1/100 *Dean's List*

## EXPERIENCE

Wenco International (Hitachi Subsidiary)

*Jan 2026 – present*

- Developed a Python and PowerShell-based CLI to audit system components and validate environment compatibility for customer deployments with automated build, packaging, and distribution workflows using PowerShell
- Built an internal React (JavaScript/JSX) web application to allow non-technical stakeholders to upload, validate, and review input data generated for the CLI
- Collaborated with senior engineers to iterate on tooling design, incorporating feedback from internal testing and real deployment environments

Southend United FC

*Feb 2025 – April 2025*

**Machine Learning Engineer Intern**

- Developed an internal tool to process soccer match clips using computer vision
- Implemented CNN-based player tracking model, spatial relationships, and coverage metrics from raw game video
- Trained K-means clustering model to assign team affiliations based on color histograms of player jerseys, achieved 99% classification accuracy
- Designed and deployed computer vision pipeline leveraging OpenCV and custom metric computation tools

## PROJECTS

**WorldView - AI-Powered Real-Time Translation App** - <https://github.com/vcalbucci/llama4-hackathon>

- Developed full-stack camera application with AI integration for real-time image analysis, translation, and contextualization with support for 9 languages
- Implemented pipeline using Flask backend; integrated OpenAI and Llama APIs for image-to-text processing
- Engineered REST API architecture supporting image processing, translation, and text-to-speech synthesis

**Java HTTP Server** - <https://github.com/vcalbucci/java-http-server>

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

**Effex - Earnings Report Calendar App**

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

**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
- Achieved 81% model accuracy on 1,535 Minecraft sessions after EDA and outlier handling
- Optimized model performance through hyperparameter tuning and cross-validation
- Utilized R (tidyverse, ggplot2, dplyr, kkn) for data processing, visualization, and model training

## TECHNICAL SKILLS

**Languages:** Java, Python, C/C++, JavaScript, TypeScript, R, SQL, HTML/CSS

**Frameworks & Libraries:** React.js, Vite, Node.js, Tensorflow, PyTorch

**Tools & Platforms:** Cursor, GitHub Copilot, Jupyter, GitHub, VSCode, AWS (Lambda, S3, RDS), WSL