

# Victor Calbucci

US Citizen | victor@calbucci.com | (425)-435-0947 | LinkedIn: [victor-calbucci](#) | GitHub: [vcalbucci](#)

## EDUCATION

University of British Columbia, Vancouver, BC

Expected Graduation, April 2027

**B.S. Computer Science**

GPA: 88.5/100 Dean's List

## 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

**WorldView - AI-Powered Real-Time Translation App**

- Developed **full-stack camera application** with **multimodal AI integration** for real-time image analysis and translation across **9 languages**
- Implemented **computer vision pipeline** using **React Camera API** and **Flask backend**; integrated **OpenAI** and **Llama APIs** for image-to-text processing
- Built **responsive mobile-first UI** using a **Meta-inspired design system** for seamless camera interaction
- Engineered **RESTful API architecture** supporting **base64 image processing**, **multi-language translation**, and **text-to-speech synthesis**

**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

**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.

**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.