

# Ryan Tolone

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## EDUCATION

### University of California, Los Angeles (UCLA)

BS in Statistics and Data Science & Minor in Data Science Engineering

Los Angeles, CA

Graduation Date: Jun 2026

## WORK & PROJECT EXPERIENCE

### Conifer Health Solutions

Irvine, CA

#### Software Engineer Intern

June 2024 – Aug 2024

- Developed and optimized software tools to streamline healthcare data processing, reducing query execution time by **20%**.
- Designed and implemented automated reports using **SQL** and **Python**, improving data accessibility for business stakeholders.
- Collaborated with senior engineers to analyze system inefficiencies and propose algorithmic improvements, leading to a **15%** performance boost in key processes.

### Computer Vision-Based Pickleball Analytics System

Feb 2025

- Developed and deployed a **real-time player and ball tracking system** using YOLOv8 and Ultralytics, achieving **90% detection accuracy** and enabling automated shot speed and in/out analysis from video footage.
- Increased keypoint precision by **20%** by fine-tuning a **ResNet50 model** and integrating **CNN-based feature extraction** in PyTorch to enhance player positioning analysis.
- Built an end-to-end **ML pipeline** optimized for object detection, tracking, and analytics to compute player speed, shot distance, and court positioning from footage.

### Algorithmic Trading System for ORB Strategy

Nov 2024

- Built an **algorithmic trading** system using **XGBoost** to classify trade profitability with precision.
- Engineered a **data pipeline** with SQL to feature engineer and process market data for strategy optimization.
- Achieved a **19.1%** annualized return improvement through model-driven trade execution.

### CNN-Based Age Prediction System

Sep 2024

- Trained a CNN-based age prediction model using **PyTorch**, the UTK dataset, and a ResNet10 CNN architecture, processing **9,000+** face images to achieve an average prediction error of  **$\pm 4$  years**.
- Optimized hyperparameters, including learning rate scheduling and regularization, improving accuracy by **28%**.
- Developed a **Streamlit UI** for real-time inference, showcasing practical applications in demographic analysis.

### Ethereum Smart Contract for NFT Generation & Minting

Dec 2023

- Designed and deployed an Ethereum smart contract for NFT generation, supporting **10,000+** unique assets with ERC-721 compliance.
- Optimized a Python-based image generation pipeline, ensuring diverse traits and **99.9%** metadata integrity.
- Reduced gas fees by **15%** and streamlined minting with a user-friendly UI, enabling **1,000+** transactions with improved efficiency.

## LEADERSHIP EXPERIENCE

### UCLA Valorant Esports Team

Los Angeles, CA

Team Captain

Jan 2023 - Jun 2023

- Led UCLA's collegiate Valorant esports team, managing strategy, communication, and performance to achieve consistent **top-5** finishes in **3+** regional tournaments, while organizing **30+** scrimmages to improve synergy and coordination
- Collaborated with university esports management to ensure compliance with league requirements, coordinate tournament logistics, and align team goals with program objectives

## SKILLS

**Programming Languages:** Python, SQL, C++, R, JavaScript

**Machine Learning & AI:** PyTorch, TensorFlow/Keras, XGBoost, CNNs, YOLO, Neural Network Optimization

**Data & Backend Engineering:** Pandas, NumPy, SQL

**Software Development:** Git, Streamlit