Ryan Tolone

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EDUCATION

University of California, Los Angeles (UCLA) Los Angeles, CA
BS in Statistics and Data Science & Minor in Data Science Engineering *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.

LSTM Based Poker Bluff Prediction Mar 2025

- Developed an end-to-end data pipeline to extract, clean, and feature-engineer real-money hand histories from PokerNow.club (blinds ranging from $0.25/$0.50 to $2/$5), resulting in a robust dataset of 10k+ hands.
- Engineered novel features—such as bet ratio, players in pot, board evaluation, and positional context—to enable advanced analysis of bluff versus value betting strategies.
- Designed and optimized a deep learning model using **LSTM** with dynamic bucketing for variable-length sequences, achieving a test **AUC of 0.77** and significantly improving predictive performance on bluff identification.

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 **±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.

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