Ari Juljulian

Glendale, CA
(818) 653-6546 | ajuljulian@ucsd.edu
linkedin.com/in/ari-juljulian-692abb245 | github.com/arijul2

Education

University of California, San Diego — San Diego, CA
Bachelor of Science in Data Science — *March 2025*

Work Experience

Data Science Intern — June 2023 - September 2023
Taline & Friends Music — *Glendale, CA*

- Developed and implemented an audience segmentation analysis model to identify untapped markets within the global Armenian diaspora
- Analyzed demographic data, engagement patterns, and purchasing behavior to create detailed customer profiles
- Presented findings to executive team, resulting in a 15% increase in targeted marketing effectiveness

Skills & Competencies

Technical Skills: Creative problem solving, LangChain, Machine Learning, Data Visualization, Data Cleaning & Transformation, Statistical Analysis, AI, Data-driven decision making, Git
Programming Languages: Python, R, SQL, JavaScript, Java
Languages: English, Armenian, French

Projects

Multi-Period Fantasy Premier League Optimization Model | *Python, sasoptpy* — June - August 2023

- Developed a Python-based optimization model with sasoptpy to automate transfer and lineup decisions, integrating real-time player data and performance projections
- Implemented complex constraints and objective functions to maximize points and optimize team value over multiple gameweeks
- Achieved a rank in the top 0.01% of all players, leveraging the model's strategic insights for superior game performance

Label-Aware Quantization for Neural Network Optimization | *Python, PyTorch, GPFQ* — September 2024 - March 2025

- Developed and evaluated a novel Label-Aware Quantization (LAQ) framework that optimizes CNN compression for specific class subsets, demonstrating significantly improved performance for dissimilar class tasks
- Implemented systematic analysis of inter-class distance impact on quantization performance across multiple architectures (ResNet50, VGG16, GoogleNet, MobileNetV2) using CIFAR-100
- Created an interactive visualization dashboard to demonstrate how class similarity affects model compression effectiveness, with findings showing up to 4-bit precision reduction can maintain high accuracy for well-separated classes

Parkinson's Disease Detection Using Deep Learning | *Python, TensorFlow* — June - July 2024

- Developed a Convolutional Neural Network (CNN) model using TensorFlow to classify Parkinson's disease from spiral drawing images with 85% accuracy
- Implemented data augmentation techniques to expand the dataset, improving model robustness and generalization
- Achieved high classification performance, leveraging advanced image preprocessing and regularization techniques to enhance predictive accuracy

Leadership Experience

Mentor & Coordinator — June 2017 - August 2019
Zavarian Summer Camp — *Glendale, CA*

- Assumed a key leadership role, overseeing daily activities and providing companionship and assistance for 100+ children
- Championed and secured the approval of a robotics initiative, introducing children to hands-on technology experiences and cultivating their interest for STEM fields

Awards

Inspiring Excellence Award — July 2018
Science County Fair — *Los Angeles, CA*

- Honored for the development of a machine learning model which accurately predicts handwritten digits
- Designed a website using HTML where users can upload an image of a handwritten digit and receive real-time predictions from the model