Brandon Wong

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EDUCATION

University of Southern California **Los Angeles, CA**
Double Major: Data Science and Cognitive Science (AI Focus) | GPA: 3.78 *Graduation Date: December 2025*

- Awards: Dean's Honors List
- Relevant Coursework: Calculus, Data Analytics, Data Structures/Algorithms, Machine Learning, Object-oriented programming, Statistics, In-memory Data Modeling, Database Management, Artificial Intelligence
- IBM Data Science Certification (Machine Learning, Clustering, Python, Data Analysis)

PROFESSIONAL EXPERIENCE

Data Science Intern **Pomona, CA**
Southern California Edison *May 2024 - August 2024*

- Developed a classification model on over 100 million rows of data using k-means clustering and k-fold cross-validation, achieving 85% accuracy in assigning nominal meter voltage across multi-voltage range meters in all phase channels
- Designed and implemented visualizations in Snowflake and other BI tools to provide actionable insights, facilitating data-driven decision-making
- Organized and analyzed data from Microsoft Access/Excel databases to identify trends in premium time, leading to a 24% reduction in company expenditures by optimizing time allocation towards substations

Data Science Intern **Culver City, CA**
MarketCast (Market Research) *June 2023 - August 2023*

- Conducted market research on datasets with 10,000+ responses, identifying insights that increased ad engagement
- Created Python program to streamline data extraction, reducing processing time by 50%, while ensuring proper data cleaning and execution of 10+ data science projects
- Implemented multivariate testing and A/B testing methodologies, evaluating the impact of various campaign elements on user behavior and engagement to improve ad retention by 21%

Neural Networks Research Assistant **Los Angeles, CA**
University of Southern California *March 2023 - June 2023*

- Utilized neural networks to simulate chemical pathways and test the impact of chronic stress on the brain's reward system
- Performed weekly data analysis and literature reviews to support ongoing deep learning projects and select optimal network architectures for vision models
- Conducted extensive experiments to enhance the performance of neural network models and fine-tune hyperparameters, resulting in a 22% increase in model accuracy compared to baseline configurations

LEADERSHIP EXPERIENCE

Service Chair **Los Angeles, CA**
Delta Omicron Zeta *August 2022- December 2022*

- Spearheaded a team of 20 to generate over $1000+ through the sale of baked goods at charity event tables, furthering *The People Concerns'* (homelessness support charity) mission

PROJECT EXPERIENCE

Recipe Recommender System

- Developed an application to recommend recipes based on available ingredients, using Optical Character Recognition (OCR) to extract text from images like grocery receipts
- Implemented an inventory management system and ingredient-matching algorithms to generate dynamic recipe suggestions, streamlining meal planning

Credit Card Fraud Detection

- Developed a fraud detection system to identify fraudulent credit card transactions in a highly imbalanced dataset, achieving 92% accuracy by addressing class imbalance with SMOTE
- Optimized Random Forest and Gradient Boosted models through hyperparameter tuning and evaluated performance using precision-recall curves

Smart Traffic Management System

- Built a reinforcement learning-based system using Proximal Policy Optimization (PPO) to optimize traffic light phases in a SUMO-simulated urban environment
- Designed and trained policy-value neural networks, creating custom reward functions and validating results through iterative simulations to enhance model performance and scalability

SKILLS

Languages: Python (Numpy, Pandas, Scikit Learn), R, Go, C++

Database/Big Data: SQL, MySQL, MongoDB, DynamoDB, AWS EC2, Hadoop, Spark, Snowflake

Other Tools: JuPyteR, Tableau, XML, XPath, Excel, Docker, Git, Github, SPSS, Qualtrics, PowerBI