Derek Wen

derek.hz.wen@gmail.com | derekwen.dev | San Diego | US Citizen

EDUCATION

University of California, Los Angeles (UCLA)   2026
M.S. Applied Statistics and Data Science   **GPA 3.96 / 4.0**

University of California, San Diego (UCSD)   2024
B.S. Data Science, Minor in Cognitive Science   **GPA 3.98 / 4.0**
Awards: Summa Cum Laude

PROFESSIONAL EXPERIENCE

Amazon - Software Development Engineer Intern   June 2025 – September 2025
- Developed a prototype web video player supporting a new proprietary Prime Video manifest format, reducing Time to First Frame (TTFF) by up to **600ms** compared to the existing DASH implementation
- Independently led the design, implementation, and testing of playback logic, consulting Principal and Senior Engineers when resolving complex issues to ensure compatibility and optimized performance

Claritas - Data Science Intern   April 2023 – February 2024
- Developed a scalable PySpark pipeline, filtering over **1 million** IP addresses across diverse data sources using multiple API integrations
- Automated the extraction of campaign data from Parquet files, the calculation of daily data quality metrics, and the development of dynamic dashboards, **saving around 2 hours of daily manual work**

Nurlink Technology - Data Analyst Intern   July 2021 – Aug 2021
- Created an automation tool to clean and preprocess incoming daily circuitry data and existing circuitry data, **reducing manual processing time by 1 hour per day**
- Applied principal component analysis for 2D visualizations, isolating noise in output power

San Diego State University (SDSU) - Data Analyst Intern   Jan 2019 – June 2020
- Analyzed integrated circuit data, processing over **1,000 features** across datasets of **50,000+ samples,** identifying key trends and creating visualizations to enhance circuit performance

PROJECT & SKILLS

Enhancing Utility Pole Monitoring with Computer Vision   September 2023 – March 2024
- Developed and fine-tuned a DETR-based computer vision model to detect utility poles and classify its material type, achieving a **0.75 recall** and **0.80 precision**
- Automated the collection of over **800 images** using the Google Street View API
- Leveraged Docker and PostgreSQL to create, update, and query utility pole databases
- Created an interactive demo that traverses streets, outputs pole coordinates and material types to a database, and visually highlights detected poles with bounding boxes

Skills: Python, SQL, R, JavaScript/TypeScript, HTML/CSS, Pandas, NumPy, PySpark, PostgreSQL
Technologies: AWS (Lambda, EC2, S3, IAM), Git, Docker, Databricks