

Gregory Quach

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EDUCATION

University of California San Diego

La Jolla, CA

B.S. in Data Science (GPA: 3.77/4.0) AI/ML specialization. Minor in Cognitive Science

Sept 2021 – Mar 2025

WORK EXPERIENCE

Machine Learning Engineer Mentee

San Diego, CA

San Diego Gas & Electric

Sept 2024 – Mar 2025

- * Presented the working prototype to SDG&E stakeholders, influencing internal discussions around AI integration and paving the way for future adoption into the company's asset management workflows.
- * Developed a computer vision model (YOLO) to automatically detect obstructions on powerlines, streamlining manual processes and reducing human error in critical infrastructure monitoring.
- * Working in a team with SDG&E and UCSD's DSC Capstone members, I served as the lead contributor to align AI solutions with real-world utility needs.

Data Analyst and Consultant

remote

One Community Global

July 2023 – Oct 2023

- * Conducted thorough data analysis and aggregation to formulate informed business decisions, utilizing spreadsheets for various visualizations to promote sustainable initiatives.

RESEARCH EXPERIENCE

Scripps Institute of Oceanography

La Jolla, CA

Undergraduate Research Assistant

Oct 2024 – Apr 2025

- * Contributed data-driven visualizations that support international environmental policy discussions, including efforts to inform and influence sustainability frameworks at the **United Nations**.
- * Utilized ArcGIS to process and visualize geospatial data, creating the first spatially explicit map to show how natural resources are valued, promoting a balanced view that includes both extractive and non-extractive contributions to national development.

Salk Institute

La Jolla, CA

Undergraduate Research Assistant

July 2024 – Mar 2025

- * Working as a team, I created open-source materials in SLEAP and SLEAP-NN to allow for widely available animal pose estimation resources.
- * Aided in the conversion of the SLEAP-NN repository from Tensorflow to Pytorch, resulting in faster, more flexible use across all operating systems.

CERTIFICATIONS

Hugging Face

AI Agents

- * Built custom AI agents using modern frameworks and tools.
- * LlamaIndex, LangGraph, and smolagents

Google

Data Analytics

- * Applied data preparation, analysis, and visualization techniques for decision-making.
- * Spreadsheets, SQL, Tableau, and R.

PROJECTS

Wavewatch

AI, fullstack

- * Used Gemini-2.0-flash to analyze and rate surf conditions, integrating live oceanic data pulled via NOAA and Stormglass into a fullstack application built with a MERN framework.
- * Provides relevant surf conditions for any beach and uses AI to analyze the goodness of the conditions specific to each beach.

League of Legends Classifier

Machine Learning

- * Developed an ML model to predict players' positions based on post-game data.
- * Utilized column transformers, pipeline, grid searcher, decision tree classifier.
- * Achieved 95% classification accuracy, surpassing 52.1% baseline.

Surfboard Notifier

LLM, script

- * Developed an automated monitoring system using Gemini-2.0-flash to categorize and filter Craigslist surfboard listings, sending only relevant notifications via email after searching criteria are met.

TECHNICAL SKILLS

Programming & Data Tools: Python, SQL, R, Pandas, Excel, scikit-learn, Dask, Spark **Visualizations:** Tableau, Seaborn, ArcGIS, Matplotlib, gradio, streamlit, D3 **Machine Learning & AI:** Computer Vision, Predictive Modeling, LLMs (LangGraph, LlamaIndex), Prompt Engineering, Recommender Systems **Cloud & DevOps:** AWS (EC2, S3), Docker, GitHub **Web:** HTML, JavaScript, Figma