

Gaurav Nair

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Education

University of California San Diego (UCSD)

09/2022 – 06/2026

B.S in Mathematics and Computer Science, Minor in Business Economics

Professional Experience

Software Engineer Intern, Qualcomm Institute

10/2024 – Present

San Diego, CA

- Creating **Virtual Environments** for **Human Research, Simulation and Immersion** using **C++**, **Git**, and **Unreal Engine 5**.
- **Built, tested, and deployed** virtual scenarios for **VR motion sickness testing** through **Unreal Engine** blueprints and **Git CI/CD** pipelines.

Undergraduate ML Researcher, Scripps Institute of Oceanography

10/2024 – Present

San Diego, CA

- Conducting **Deep Learning** research on large climate datasets (**cloud-aerosol interactions**) using **Pytorch**, **TensorFlow**, and **VAE**.
- Designed and implemented a **distributed inference pipeline** for **large-scale image processing**.
- Integrated two existing **unsupervised learning** models with **two segmentation models** (semantic segmentation and Stanford instance segmentation).
- Developed a Python script to **load and process image chunks** through all four models and **automated remote execution** by writing a **Bash script** to deploy and run the pipeline asynchronously on two remote systems.
- Optimized **inference speed** by **40%** by parallelizing model execution across multiple remote systems.
- Improved **processing efficiency** by **35%** through asynchronous execution and reduced I/O bottlenecks.

Data Analysis and ML Intern, Mswipe Technologies

07/2024 – 09/2024

Mumbai, India

- **Automated** distance calculation using **Python** and **OpenRouteService API**, saving **5** weekly employee hours.
- **Automated** conversion of latitudes/longitudes to pin codes through **reverse geocoding** using Python's **geopy** library and **OpenStreetMap API**, saving **10** weekly employee hours.
- Developed Python scripts for **time-series forecasting** of transaction volume and Help Desk productivity.
- Conducted **exploratory data analysis** of FSE productivity with pie charts, boxplots, and heatmaps.

Senior Quantitative Analyst, Hedge Fund Club @ UCSD

04/2024 – 12/2024

San Diego, CA

- Specialized in **quantitative equity research** for the **technology** sector.
- Meticulously **evaluated tech stocks** and crafted **comprehensive presentations** encompassing industry insights, **financial ratios**, business profiles, comparative analysis of peer companies, risk assessment and **discounted cash flow (DCF)** modelling.

Product Management Intern, Netcore Cloud

07/2023 – 09/2023

Mumbai, India

- Developed **Generative AI** use cases for **MarTech** stack; performed **competitive analysis** on AI use in the industry.
- Built **Segments** and **Customer Journeys** using **RFM analysis**.
- Trained **LLM** on client WhatsApp data (**150,000+ rows**) for **template identification** and **generation**.
- Drafted **Product Requirement Documents**, **Jira user stories**, and **wireframes**.

Projects

- **Bitcoin Price Prediction**: Used Python (Pandas, yFinance, Tweepy, Prophet) for **data processing**, **sentiment analysis**, and **time-series forecasting** with data from **Twitter API** and **CoinGecko API**.
- Utilized **Pandas** and **Scikit-learn** for data processing and model development.
- Applied **logistic regression** and **random forests**, achieving **75%** prediction accuracy.