

TANMAY DESAI

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EDUCATION

University of California, Los Angeles (UCLA)

Los Angeles, CA

Bachelor of Science, Computer Science and Engineering

Expected June 2025

- **Coursework:** Machine Learning, Data Science, Advanced Algorithms, Data Structures and Algorithms, Software Engineering, Operating Systems, Linear Algebra, Discrete Mathematics, Tech Management and Economics, Finance and Marketing, Intro to Bioinformatics.

TECHNICAL SKILLS

- **Programming Languages/Databases:** Python | SQL | C/C++ | Snowflake | SurrealDB | Html | CSS | JS | Haskell | R.
- **Technologies:** Emacs | Microsoft Office | Git Version Control | Microsoft Excel | Microsoft Azure | Databricks | Data Build Tool (DBT) | Node.js | Network Programming using Sockets.
- **Project Management:** Agile Methodology | Waterfall Methodology | Asana Software | JIRA Software.
- **Languages:** English (Fluent), Gujarati (Fluent), Hindi (Fluent), Spanish (Classroom Study).

EXPERIENCE

Data Analytics and Software Engineering Intern

February 2024 - December 2024

National Science Foundation

Los Angeles, CA

- Developed a **Python web scraper** using **Playwright** and **BeautifulSoup** to extract project data from UCLA's Technology Publisher, reducing manual effort by **8.33% daily**, and **automated** extract and load process using a scheduling algorithm for 24-hour updates.
- Implemented a chatbot using **HTML**, **CSS**, and **JavaScript** to streamline information retrieval, enabling focus on high-priority inquiries.

Data Analytics Intern

June 2024 - August 2024

Entertainment Partners

Burbank, CA

- Pioneered an **NLP model** using **Python**, **Scikit-learn**, **NLTK**, and **Pandas** to analyze a previously unexamined "Additional Information" section of **escalation** data, uncovering **~27%** of cases were prematurely closed.
- Restructured data gathered from **Qlik** with Excel (**pivot tables**, **VLOOKUPs**, and **macros**), identified **3,000+** setup errors, and presented findings via **dashboards**, boosting operational efficiency by **25-30%**.

Software Development Intern

June 2023 - September 2023

Data Coves

Thousand Oaks, CA

- Engineered the first dbt adapter for **SurrealDB** using **Python**, **dbt**, and **SurrealDB's API**, facilitating seamless integration of SurrealDB with dbt workflows and **NoSQL** data pipelines.
- Integrated a **custom connection manager** and **column type handler** for SurrealDB with **async support**, supporting non-blocking, efficient query execution and achieving **real-time** interaction performance within dbt workflows.

Data Analyst

April 2023 - Present

Data Science Union (UCLA Organization)

Los Angeles, CA

- Conducted **EDA** on **~2,000** global homicide data points using **Pandas**, **Matplotlib**, **Plotly**, and **ipywidgets**, creating **visualizations** and interactive tools; won **1st** place in an **EDA** (Exploratory Data Analysis) final competition among **20+** top-tier club members.
- Mapped and explored San Vicente Lopez's adjusted emissions (CH₄, CO₂, N₂O) for 2021-2022 using **Pandas**, **GeoPandas**, and **Matplotlib**; visualized emissions on **geospatial maps** and provided insights for Open Earth's environmental decision-making.

Senior Analyst

January 2022 - Present

Consult Your Community (UCLA Organization)

Los Angeles, CA

- Collaborated with **cross-functional** teams to align website redesign and SEO priorities, driving a **39%** increase in monthly visitors (38 to 53) and a **3-minute** increase in average session duration **within 2 months**.
- Investigated data on **10** senior living facilities in Los Angeles, focusing on pricing, occupancy, and services using **SWOT** and **competitor benchmarking**, providing insights that boosted brand recognition and competitiveness in the local market.

KEY PROJECT

DeepVision Image Enhancement (Python, Deep Learning)

Los Angeles, CA

Lead Developer

- Architected a **TensorFlow**-based **ESPCN model** to upscale low-resolution images by **3x**, leveraging **orthonormal initialization** and **ReLU activation**, improving PSNR from **4.73** to **27.75** and achieving refined image quality across **165 testing** images.
- Executed a scalable **preprocessing pipeline**, normalizing image data and converting it to **YUV color space** using **Pillow**, **OpenCV**, **NumPy**, and **SciPy**, while integrating **early stopping** and PSNR monitoring with **Keras** and **scikit-learn** to efficiently train **664 images**.

AWARDS AND ACHIEVEMENTS

- **Certifications:** Python for Data Science and Machine Learning Bootcamp (IP), Azure Databricks and Spark SQL (Python), The Data Analyst Course: Complete Data Analyst Bootcamp (IP), Databricks SQL for Data Analysts (IP), dbt Fundamentals.
- **Athletics:** Student Athlete @ UCLA - Cricket (President), Division 1 SCCA (Southern California Cricket Association), Wrestling (6 years).
- **Awards:** Full International Baccalaureate Diploma, California State Seal of Civic Engagement, Cognizant Digital Leadership Academy (DLA).