Tomas Dos Santos

(951) 455-0825 · tomas.s.dossantos@gmail.com
LinkedIn · Portfolio

Skills: Python · PyTorch · Scikit-Learn · Seaborn · TensorFlow · Pandas · SQL · Excel · R · JavaScript · React · Django

EXPERIENCE

Research Assistant/Co-Author **May 2022 - Present**

Mathematical Principles in Physics

- Applied advanced mathematical concepts to co-author a comprehensive textbook on quantum mechanics and mathematical modeling with UCR professor Dr. Desai set for publication in 2025.
- Drafted and meticulously reviewed over 220 pages of technical content in LaTeX, ensuring precision and clarity in complex theoretical explanations.
- Conducted in-depth research and data analysis to support the development of accurate mathematical models.
- Collaborated with the professors and peer reviewers to refine and validate the manuscript.

Environmental Health and Safety Specialist **Mar 2024 - Jun 2024**

UCR Environmental Health and Safety

- Conducted comprehensive assessments of 80 storm drain system facilities to ensure operational efficiency and compliance with environmental regulations.
- Collected, organized, and maintained detailed environmental health and safety data for UCR campus.
- Ensured compliance with the Construction Site Runoff Control Program, reducing potential environmental impact.
- Developed and implemented quantitative analysis models and interactive dashboards to monitor and report key environmental metrics.

Undergraduate Researcher **Dec 2023 - Jun 2024**

University of California, Riverside

- Developed and implemented advanced numerical methods in Python to calculate geodesic distances.
- Leveraged Monte Carlo techniques with NumPy for probability evaluation, reducing computation time by 85%.
- Conducted in-depth analysis of memory complexity to optimize the scalability of geodesic numerical analysis.
- Presented findings to a committee of professors and undergraduate students, effectively communicating analytical insights and advanced modeling techniques.

PROJECTS

Math Research
Python, NumPy
Developed Python-based numerical methods for calculating distances on manifolds.

Income Prediction
TensorFlow, Scikit-Learn
Using data science tactics to predict an individual's income based on demographic features.

Language Model
PyTorch
Developed a language model using PyTorch, trained on my LaTeX university assignments.

CLUBS & LEADERSHIP

Co-Founder

AI Student Collective

- Co-Founder of the first Artificial Intelligence club at UCR and raised to 100+ members.
- Organized a talk with a keynote speaker from Microsoft on the evolving landscape of AI.
- Led workshops on machine learning and data science projects.

Vice President of Learning Community

Sigma Phi Epsilon

- Played a pivotal role in receiving UCR Chapter of the Year and Highest GPA Awards 2022-2023.
- Raised cumulative Chapter GPA from 2.93 to 3.18 by hosting tutoring for fraternity members.
- Delegate for 2023 Sigep Grand Chapter Conclave voting and shaping the future Bylaws for the fraternity.

EDUCATION

University of California, Riverside **Sept 2022 - Jun 2024**

Bachelor of Science in Mathematics · GPA: 3.77
Chancellor's List Sept 2022 - March 2024