Sahith Edula

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Education

University of California, San Diego — La Jolla, CA

B.S. in Mathematics, B.S. in Economics, Minor in Computer Science, ***3.98/4.00 CGPA*** — *Sept. 2023 – June 2027*

Muir College Caledonian Honors Society 2025

Putnam Mathematical Competition: scored 13 (2023) and 12 (2024), Top 25% of participants

Coursework

Graduate: Methods in Data Science (Supervised/Unsupervised Learning), Probability, Microeconomics

Undergraduate: Computational Stochastics, Image Processing, Machine Learning in Physics, Game Theory, Behavioral Economics, Graph Theory, Real/Complex Analysis, Abstract Algebra, Differential Geometry, Numerical Analysis

Experience

Research Project — June 2025 – Present

UC San Diego Mathematics/Baruch College — *La Jolla, CA/New York City, NY*

- Researching the use of Optimal Transport Theory for generative machine learning
- Developing real-world applicable models using PyTorch for weather-forecasting and finance
- Using optimization techniques to speed up model training while maintaining accuracy

Undergraduate Research Assistant — March 2024 – June 2025

UC San Diego Economics — *La Jolla, CA*

- Scraped Graduate Enrollment statistics in the UC System from Tableau dashboards and public datasets using requests-HTML and Selenium
- Developed a script to utilize Tesseract OCR and OpenCV to parse text and layouts of documents and utilized it to process data on displaced persons in post India-Pakistan Partition Census Records, including robust checks for mistakes and missing values
- Helped conduct lab experiments for a social learning Behavioral Economics project, visualized data from the experiments using Matplotlib and seaborn, and prepared presentations using LaTeX

Undergraduate Teaching Assistant — September 2024 – Present

UC San Diego — *La Jolla, CA*

- Graded advanced undergraduate coursework across 4 quarters including the Honors Multivariable Calculus sequence (MATH 31AH/BH/CH), Linear Algebra (MATH 18), and Vector Calculus (MATH 20E)
- Held discussion sessions and office hours for Linear Algebra to reinforce core concepts through personalized instruction, achieving a 91% evaluation from students and excellent evaluations from Professors
- Evaluated formal mathematical proofs and problem sets, ensuring clarity, rigor, and timely feedback
- Supported faculty in maintaining academic integrity and effective communication in a fast-paced, technical learning environment

Projects

Chess Engine | *Python, NumPy, Pygame, C++* — June 2023 – Present

- Created a UCI-compliant Chess engine using C++ alongside a GUI using python
- Working on improving the engine's evaluation function using an Efficiently Updatable Neural Network (NNUE).

Machine Translation | *Python, Tensorflow, pandas, Jieba* — Jan 2023 – Present

- Created a Machine Translation Model using encoder-decoder architecture and LSTM cells to translate text across romance languages
- Used the pandas library to organize language pair corpora
- Working on implementing word segmentation using Jieba to translate between character-based languages like Mandarin Chinese

Technical Skills

Languages: Python, C++, MATLAB, SQL (Postgres), STATA, Java, R

Developer Tools: VS Code, PyCharm, Tableau, Git, Google Cloud, Anaconda

Libraries: pandas, numPy, Matplotlib, seaborn, Bokeh, Tensorflow, keras, pyTorch, openCV, pillow, scipy, requests, Selenium