

# Sri Sai Naga Venkata Adithya Swarna

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## Education

UNIVERSITY OF CALIFORNIA, RIVERSIDE  
Master of Science in Computer Engineering (3.75/4.0)

Riverside, California, USA  
Expected Graduation: **December 2024**

## Skills

**Technical:** Python, Selenium, C, PLSQL, HTML, CSS, Fast Formulas, CUDA C, ML Libraries, Tableau (**In Progress**)  
**Software & Hardware Tools:** GIT, MS Office, Oracle HCM, Cadence, Arduino, Lab VIEW, MATLAB, Proteus.

## Projects

### Conway's Game of Life project using GPU

- Achieved up to 10x speedup after implementing game of life on GPU using Numba compared to serial CPU code.
- Designed & developed parallel algorithm to update game state by mapping grid cells to CUDA thread blocks for concurrent execution on GPU. Profiled & optimized kernel configuration, block size, grid shape to maximize GPU utilization & achieved high performance.
- Visualized game state evolution over generations by plotting matrices using Matplotlib animations.

### Full Swing 8x8 XOR Content Addressable Memory (Published a [IEEE Conference Paper](#))

- Published a paper on Content Addressable Memory (CAM) design at IEEE INOCON 2020 as lead author.
- Designed & validated high performance CAM architecture using advanced modeling & simulation.
- Developed robust 8x8 SRAM array with optimized memory cell design for integrated storage in CAM.
- Leveraged SRAM array for fast, reliable storage to enable sub-20ns search time in CAM.

### SpaceX Falcon 9 Landing Prediction

- Performed EDA on SpaceX launch data using Python, SQL; built interactive Matplotlib, Folium map & Plotly dashboard to visualize key metrics.
- Trained classification models including Logistic Regression, SVM, Decision Trees using Scikit-Learn.
- Achieved 87% accuracy in predicting successful rocket landing outcomes with Decision Tree model. Identified optimal launch sites & payload mass ranges for highest success rate through analysis.

### Stock Market Data Analysis Projects

- Extracted financial data with yfinance and Beautiful Soup, processed with Pandas/NumPy, and analyzed large historical stock datasets.
- Performed EDA on stock, housing & airline performance datasets using Python; identified trends & relationships between attributes through statistical analysis & data visualizations. Visualized key metrics with Plotly.

## EXPERIENCE

Tata Consultancy Services (TCS)

Hyderabad, Telangana, India

**Systems Engineer – Oracle HCM Techno Functional Developer**

**January 2021 – July 2023 (2 Years 7 Months)**

- Configured & implemented HCM modules (Core HR, Absence Management, & Time and Labor) through development, customization & integration enabling successful migration & reduced implementation time.
- Conducted virtual training & demos for end users by creating materials & giving presentations, ensuring successful adoption & increased productivity.
- Consistently delivered under tight deadlines & swiftly adapted to changing requirements; earned multiple commendations & promotion from Assistant to Systems Engineer.
- Built various Python scripts for unit and system integration testing.
- Swiftly learned Oracle HCM within a short time frame, enabling rapid project contributions. Willing to explore and eager to master new technologies and contribute to project, similar to past learning experiences.

## CERTIFICATIONS

Algorithms, [IBM Data Science on Coursera](#), [Programming for Everybody](#), [Python Data Structures](#), [Using Python to Access Web Data](#), [Using Databases with Python](#).

## OTHER ACTIVITIES

1. Selected for the **Associate Cloud Engineer (GCP) cohort**. Currently in Stage 2 (final stage), with the next step being to receive a free exam coupon from Google. The program focuses on Associate Cloud Engineer certification.
2. Conducted a literature survey on LLMs and LLMs for mobile phones.
3. Developed automation scripts using **Python & Selenium** to perform web scraping & system tasks including verifying receipt of TCS offer letter.
4. Built web scraper to extract data, stored in MongoDB on AWS (Elastic-bean), and displayed through Flask site.