Ventrapragada Sai Srikar

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Education

University of Maryland College Park — *Maryland, USA*
Master of Science in Data Science — ***Aug 2025 – May 2027***
Courses: Probability & Statistics, Principles of Data Science and Machine Learning

Mahindra University — *Hyderabad, India*
Bachelor of Technology in Artificial Intelligence — ***Aug 2020 – June 2024***
Courses: Deep Learning, Natural Language Processing, Reinforcement learning **GPA:** 8.52/10
Ranked Top 2% in class of 165 students, Awarded Academic Scholarship for 3 consecutive years

Skills

Programming Languages: Python, C/C++, HTML/CSS, JavaScript, SQL, Bash
Developer Tools:VS Code, Git Version Control, Github, Docker, Vim, Linux
Technologies/Frameworks: Pytorch, JAX, Tensorflow, Keras, Scikit-learn, OpenCV, Langchain, Matplotlib, Seaborn, Pandas, Numpy, SpaCy, NLTK, PySpark, Pycord, FastAPI, mongoDB, MySQL, Langhchain, Langflow
ML and DL related: Supervised Learning, Unsupervised Learning, Reinforcement Learning (RL), Deep Learning (DL), Natural Language Processing (NLP), Computer Vision (CV), Generative AI

Experience

Junior Data Scientist — Hyderabad, India
Astria Digital — *Feb 2025 – Jun 2025*

- Designed and developed **demand and price forecasting** ML models for a logistics company and achieved an $\mathbf{R^2}$ **score** of **0.89** and an **MAPE** of **24.6%**
- Deployed scalable **serverless ML pipelines on AWS** and automated the process of price forecasting thereby reduced the forecasting time by **70%** over a **horizon of 10 days**.

AI Functional Consultant — Hyderabad, India
Government of Telangana — *Sep 2024 – Jan 2025*

- Worked in tandem with the **IT advisor** of the state to build a **Generative AI chatbot** that streamlined retrieval of federal records and enabled faster access to critical information for policy and decision making.
- Assisted in shaping course curricula for the **AI for Grassroots Program**, a state led initiative aimed at empowering rural students.

Data Science Intern — Hyderabad, India
Aiden Ai — *Jan 2024 – Aug 2024*

- Developed AI-powered software leveraging **YOLO** and **QLoRA** fine tuned LLMs to automate **Unqork** application creation, reduced the development time by **67%** while incorporating a human in the loop for final refinements.
- Built a proof of concept system to automate meeting minutes by processing Teams recordings, utilizing **Whisper** for voice transcription and **OpenCV** for speaker diarization. Integrated it with a **Retrieval Augmented Generation(RAG)** based chat bot to deliver query responses, post meeting action items and summarized insights.
- Identified inefficiencies in manual server deployment processes, proposed and developed an automated solution using **Python** and **AWS SDK(boto3)** to provision and manage **EC2 instances**.

AI & ML Research Intern — Hyderabad, India
5th Bridge Data Technologies — *June 2023 – Aug 2023*

- Contributed to the development and deployment of state of the art Software for **Payload Based Malicious HTTP Traffic Detection** system, by leveraging transfer semi-supervised learning techniques.
- Focused on optimizing **precision** for the **Payload Based Malicious HTTP Traffic Detection** system, obtained an **accuracy** of **70%**

Research Projects

Machine Learning based approach for accurate sensing of Dissolved Oxygen for Aquaculture *March 2024 – June 2024*

- Under the guidance of Dr.Bharghava Rajaram developed a cost-effective, machine learning-based smart sensor using supplementary sensors for accurate dissolved oxygen estimation in aquaculture, reducing costs by approximately 80%.

Self-Organizing Map for Automated Quality Assessment in Algorithmic Music Computation *Aug 2023 – Jan 2024*

- Under the guidance of Dr.Arya K Bhattacharya and Dr.Prafulla Kalapatapu developed a Self-Organizing Map-based Fitness Function for Evolutionary Algorithms to automate quality assessment in Rasa-aligned music composition, demonstrating high accuracy even with limited data. DOI: 10.1109/ICETCI62771.2024.10704148

Projects

OneAIClick.com *June 2024*

- Developed a no-code GUI solution for fine-tuning open source HuggingFace LLMs, enabling users to finetunemodels with minimal technical knowledge using parameter-efficient methods. Enabled rapid model deployment and fine-tuning with full data privacy, offering a cost-effective alternative to hiring AI specialists for rapid testing of ideas.

Smart Grid Management using Reinforcement Learning *Nov 2023*

- Developed and implemented On-Policy Monte Carlo, SARSA, and Q-Learning algorithms to optimize battery storage and power plant production in smart grids, enhancing energy efficiency and reliability.

Optimizing Millimeter Wave Communication with Contextual Bandits *Oct 2023*

- Designed and implemented contextual bandit algorithms ($\mathcal{E}-$**greedy**, **UCB** and **Policy gradient**) to optimize beam alignment in millimeter-wave communication, enhancing the reliability and efficiency of vehicular communication systems.

Concurrent Data Management: From Locks to NUMA-Aware Hashmap-Based Solution *April 2023*

- Engineered a hierarchical Hashmap-based NUMA-aware lock, optimizing memory usage to just one word. Reduced remote cache misses, outperforming NUMA-oblivious approaches by 40% on two-socket machines and 100% on four-socket machines under contention.

Generative Art *June 2022*

- Created computer-generated art by implementing fundamental mechanical physics concepts such as oscillation and gravitation from the ground up using Processing.

Discord Dining Menu Bot *May 2022*

- Developed a **Discord Dining Bot** that notifies dorm residents of **meal menu 30 minutes prior mealtimes**, streamlined the dining experience and achieved **1500+ daily active users**.

Achievements

Academic Scholarship: Awarded merit-based scholarship for being in the top 10% of academic performers in my branch for three consecutive academic years (2020–2023).

Co-authored a paper titled "**Self-Organizing Map for Automated Quality Assessment in Algorithmic Music Computation,"**

Finalist at T-Works Byte Bending Embedded Challenge: Recognized as a finalist in the national-level T-Works Byte Bending Challenge, an embedded systems hackathon. Secured a position among the top 20 teams out of 600+ teams that participated.

Achieved 1500+ Daily Active Users: Developed a Discord Dining Bot to notify users of dorms meal menus 30 minutes prior mealtimes, streamlining dining experiences

Speaker at AI4Bharat Paper Reading Session 9: Delivered a technical talk on Meta's ImageBind Paper.

Guest Lecture for CS3102 Operating Systems:: Delivered a talk on real-world applications of OS, covering algorithms behind concurrent collaborative systems and real-time scheduling techniques.

Embedded Systems Spy Of Light Challenge: Secured 1st place among 15+ teams

Embedded Systems Escape Room Challenge: Secured 3rd place among 20+ teams

Math Rayleigh Race Challenge: Secured 2nd place among 12+ teams

Positions Of Responsibility

Nvidia

Certified Nvidia Student Ambassador *Mar 2023 – Aug 2024*

- Conducted a workshop aimed at harnessing Nvidia SDKs and models to enhance proficiency in Natural Language Processing Tasks
- Coordinated a hackathon in conjunction with Nvidia for the ICETC2023 conference, focusing on the inventive application of Nvidia's extant toolkits for the development and refinement of generative pretrained models.

Enigma: Computer Science Club Mahindra University
Vice Secretary *Nov 2021 – Jul 2023*

- As a council member of the CS club at my university, spearheaded initiatives such as a session on building algorithms by Dr. Zvi Galil, a Generative Hackathon in collaboration with Nvidia and a Game Jam in collaboration with Ubisoft.

Entrepreneurship and Innovation Club Mahindra University
Co-Founder & Podcast Host of Idea to Impact *Aug 2023 – April 2024*

- Hosted the initial set of episodes of Idea to Impact, which is a student run podcast by Entrepreneurship and Innovation Club.
- Featured prominent episodes with industry leaders, including the CTO of Zerodha and the CEO of Tworks.

Certificates

Machine Learning Specialization *Aug 2022*
Supervised Machine Learning,Unsupervised Learning, Recommender Systems and Reinforcement Learning
AI for Everyone *Apr 2022*
Fundamental understanding of AI