Aditya Sridhar

Home Page   GitHub Profile

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I am a U.S. citizen pursuing a B.Tech in Computer Science & Engineering at IIT Hyderabad, specializing in **Machine Learning, NLP, LLMs, and model fine-tuning**. With a strong foundation in **AI scalability, MLOps, Cloud Computing**, and **model deployment**, I have built high-impact solutions, including a 95%-accurate skill-matching algorithm that won the JLR Global NLP Hackathon. Passionate about optimizing deep learning systems, I thrive in high-performance teams and aim to drive cutting-edge AI innovations.

Skills:

Programming: Python, C, C++, SQL

Machine Learning & AI: Deep Learning (PyTorch, TensorFlow, Keras, Scikit-learn), Transformers, Computer Vision (Research Interest), Reinforcement Learning, Supervised & Unsupervised Learning, Transfer Learning, Model Optimization, Model Interpretability

High-Performance Computing: CUDA, GPU Acceleration, Efficient Model Training

Cloud & Deployment: Docker, Cloud Computing (Google Cloud, AWS), CI/CD, MLOps, Model Deployment

Data & Engineering: MySQL, NLP, A/B Testing, Applied Statistics, Neural Networks, Data Structures and Algorithms

WORK EXPERIENCE

HeyDaw Technologies Pvt. Ltd.   **May 2023-Jul 2023**
CPO (Chief Product Officer)   Chennai, India

- Led an 8-member team in developing and **deploying** an **NLP-powered** music production bot for streamlining workflows and elevating user experience, leveraging **AWS for scalable cloud deployment.**
- **Fine-tuned GPT** and other **Large Language Models** for **domain-specific conversational AI,** resulting in **25% improved response accuracy.**

Jaguar Land Rover   **May 2024-Jul 2024**
Software Development Engineer Intern   Bangalore, India

- Automated end-to-end sprint planning in Jira by **building robust API integrations**, cutting manual **task creation and assignment time by 35x**, and implementing **CI/CD pipelines** for seamless deployment.
- Spearheaded testing automation development for vehicle software updates, creating **end-to-end modular** workflows and **reducing validation time by 40%.**

Valet Network Inc.   **Aug 2024–Present**
Consultant and Head, Artificial Intelligence Engineering   New York, USA

- Engineered predictive models for valet demand forecasting and parking availability prediction, achieving **95% accuracy** in simulation environments using **supervised learning techniques, exponential smoothing, and adaptive weighting.**
- Optimized **operational efficiency by 30%** by implementing graph-based optimization algorithms to reduce valet relocation times.
- Streamlined model deployment by integrating **real-time ML inference with Docker**, enabling **scalable MLOps workflows** for production.

EDUCATION

Indian Institute of Technology (IIT), Hyderabad   **Nov 2021 – Apr 2025**
Bachelor of Technology (B.Tech) – Computer Science & Engineering and Engineering Science   **GPA: 9.1/10**

PROJECTS AND PUBLICATIONS

Semantic Perturbation-Based Counterfactuals and Training for Robustness against Adversarial Attacks

- Developed a novel semantically faithful **counterfactual framework** by perturbing latent space activations, **boosting desired model accuracy by 15%.**
- Designed a **stability regularization term** fortifying models against **adversarial attacks,** enhancing robustness in **real-world deployment scenarios.**

Skills: TensorFlow, CUDA for accelerated training, Model Optimization, Computer Vision, Neural Networks, Model Robustness | *GitHub Repository:* **Link**

Attention-Guided Spectrogram Sequence Modeling with CNNs for Music Genre Classification
[https://arxiv.org/abs/2411.14474]

- Architected a novel **attention-based CNN model** for music genre classification, achieving **state-of-the-art accuracy.**
- Leveraged **semi-supervised learning, transfer learning,** and **data preprocessing,** optimizing classification performance with **limited labeled data**.
- Generated **deep neural embeddings**, improving feature representations for scalable classification and recommendation systems.

Skills: Deep Learning, PyTorch, CUDA, Transformers, Feature Engineering, Semi-Supervised Learning, MLOps | *GitHub Repository:* **Link**

AWARDS AND RECOGNITION

WINNER: JLR Global Hackathon (Top 1%, 250+ Teams)

- Led a cross-functional team of full-time engineers as an intern, demonstrating **leadership, collaboration, and strategic problem-solving.**
- Devised an NLP-based skill-matching algorithm using **LLMs**, achieving **95% accuracy** and optimizing task allocation via **MLOps pipelines.**
- **Co-authored documentation** and delivered a **high-impact presentation**, showcasing technical communication and domain expertise in **NLP, algorith optimization, and model deployment.**

IIT Hyderabad Academic Excellence Award – Apr 2022: Secured **highest GPA in class (9.75/10)**

Indian National Mathematics Olympiad – Oct 2019: **Top 0.05% nationwide**, qualifying through the highly competitive Regional Mathemati Olympiad examination to write the prestigious Indian National Mathematics Olympiad.