AKSHIT SHARMA

📞 +91 9818490029 ✉ akshitshr@gmail.com
🔗 LinkedIn GitHub

Education

International Institute of Information Technology, Hyderabad (IIIT-H)   **Expected May 2025**
Bachelor of Technology in Computer Science and Engineering (CGPA: 9.21)   *Hyderabad, Telangana*

Experience

PayPal Holdings, Inc   **May 2024 – Aug 2024**
Machine Learning Intern   *Chennai, Tamil Nadu*
- Developed an anomaly detection and alert count prediction tool for a Compliance platform using React.js and Flask, leveraging deep learning and statistical models to reduce Mean Time to Detect(MTTD) and manual efforts. Also built a spec reader (RAG) tool using Llama-3 7B model and Milvus vector database.

Teaching Assistant   **Aug 2023 – May 2024**
IIIT-H   *Hyderabad, Telangana*
- TA for **Probability and Statistics** course (Monsoon'23 semester) and **Design and Analysis of Software Systems** course (Spring'24 semester).

Cyrrup Solutions Pvt. Ltd.   **Jan 2023 – May 2023**
Software Development Intern   *Hyderabad, Telangana*
- Developed an Android logistics app for truck fleet managers using Flutter. Migration from a Java-based architecture to Flutter achieved a 20% reduction in app launch time and 15% decrease in memory usage. These optimizations significantly enhanced the app's performance, efficiency and overall user experience.

Projects

Social Media Web App (Reddit clone - Greddit) | *MERN Stack, Docker* | **Link**
* Created a dockerized web portal to mimic the functionality of the popular social media platform Reddit.

Interactive Shell for Linux | *C, Bash* | **Link**
* Implemented a shell from scratch, using modular C code, with features such as I/O redirection, piping, auto-completion, background and foreground processes, signals, command history, etc.

Distributed Algorithms using MPI | *C++, Bash* | **Link**
* Implemented multiple algorithms from scratch, including K-Nearest Neighbors, Prefix Sum, Matrix Inverse, and Matrix Chain Multiplication using Message Passing Interface (MPI) in C++ to reduce computation time by parallelizing computations across distributed systems.

fMRI to Image Reconstruction using GANs | *Pytorch, Numpy, Pandas* | **(Link)**
* Trained a Generative Adversarial Network (GAN) to generate images from fMRI data, incorporating a novel loss term based on ImageNet embedding distances, resulting in a 10% improvement in the generation performance metric.

NLP Projects | *Pytorch, NLP, GenAI*
* **Hypernym Discovery Project:** Identifying broader categories or hypernyms (top-k) for a given input term. Techniques such as KNN, MLP models were used for this task and their performance was compared against the latest LLMs like Gemini and GPT, prompted using 1-shot and 2-shot learning approaches.**(Link)**
* **GPT-2 Fine Tuning:** Fine tuned GPT-2 for summarisation task by implementing PEFT techniques from scratch like prompt tuning, LORA, prefix tuning and compared their performance using ROUGE score.
* **Query Guided Multi-Perspective Answer Summarisation:** Implemented an answer summarisation pipeline by integrating techniques from AnswerSumm and neural query-focused summarisation (NAACL 2022) papers to generate abstractive answer summaries from multiple perspectives.

Skills and Knowledge

Technologies and Frameworks: Pandas, Numpy, LangChain, Pytorch, APIs, Vector DB, GenAI and LLMs, Hugging Face, MongoDB, Express, Git, Node.js, React.js, Docker, Flask, MySQL, Flutter, Firebase, Postman, OOP, TensorFlow, Scikit-learn, AWS, Azure
Programming Languages: Python, C, C++, R, Bash, HTML/CSS, JavaScript, SQL, X86 Assembly, Dart, Go
Courses: Data Structures and Algorithms, Distributed Systems, Advanced NLP, Statistical Methods in AI, Operating Systems and Networks, Deep Learning, Data & Applications, System Architecture, Performance Modelling, Digital Systems

Achievements

Secured 7th position in Amazon ML Challenge (2024), with more than 2500 teams 75K+ participants across India **(Link)**
Awarded **Dean's List** for 3 consecutive years at IIIT Hyderabad (2022-2024), with a perfect 10 SGPA in 6th semester
JEE Mains 2021: Ranked 956 out of 1 million candidates (99.93 Percentile)
JEE Advanced 2021: Ranked 2142 out of 150K candidates (98.6 Percentile)
98% score in CBSE AISSCE (12th standard, PCM) and 98.4% score in CBSE SSE (10th standard)
100% score in Mathematics and Chemistry in CBSE 12th standard examinations