ADITYA KULSHRESTHA

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Education

Institute of Engineering and Technology — Dec. 2021 – June 2025
Bachelor of Technology in Computer Science Engineering — *CGPA - 8.72 Lucknow, Uttar Pradesh*

Experience

SilWalk, Inc — September 2023 – November 2023
Machine Learning Engineer Intern — *Remote*
- Architected and implemented HTTP live streaming and audio transcription solutions, leveraging Nvidia Nemo toolkit for accurate diarization and speaker identification; reduced transcription time by 50% and improved accuracy by 20%
- Applied topic modelling for abstractive summarization and critical thinking evaluation.
- Developed and deployed Restful API end points for the models and pipelines using FastAPI on AWS Cloud.
- mplemented SOTA papers on Abstractive Summarization of meetings/discussion using unsupervised topic extraction and role-based summarization.

Build Fast with AI — May 2023 – November 2023
Machine Learning Engineer Intern — *Remote*
- Fine tuned GPT 3.5 for question discriminator that only responds to certain types of questions. Built full stack application prototype for the client.
- Worked with Langchain, LLama-Index and Replicate to fine tune model for clients.
- Developed and deployed API end points for the models and pipelines on Replicate.

Launchpad.AI — May 2023 – July 2023
Machine Learning Fellow — *Remote*
- Worked in a team of 15 teammates to develop a ChatGpt Advisor that helps with finance related queries.
- Researched and implemented QLora and PEFT Techniques to fine-tune and benchmark LLMs; achieved a 20% increase in model accuracy and reduced inference time by 15%
- Led data curation, prompt engineering and benchmarking efforts for model evaluation.
- Implemented innovative routing strategies for personalized wealth management recommendations.

Projects

Multi Modal Medical LLama | *Python, FastAPI, Gradio, Whisper, LLama, Huggingface and Tensorflow* — **January 2021**
- Built a multimodal fine tuned LLM specifically designed to respond with human like responses to the medical queries by the user.
- Implemented LoRA-based quantization for GPU-efficient fine tuning on an open source data.
- Built pipelines to accept data across multiple modalities including text, audio and ECG Signal Data.
- Built a user-friendly web interface using gradio for easy inferencing of the model.

Foot Traffic | *Python, OpenCV, FastAPI, YOLO, DeepSort and SQL* — **November 2020**
- Created an application that counts and tracks the number of people entering in a location.
- Received frames through socket connection and processed the frame at the backend.
- Utilized YOLO and DeepSORT algorithms to track the individual and push the data to SQL on realtime basis.

Technical Skills

Languages: Python, C++, C, SQL
Developer Tools: VS Code, PyCharm, Amazon Web Services, Jupyter Notebook
Technologies/Frameworks: Linux, Jira, GitHub, Django, PyTorch, FastAPI, Tensorflow, Scikit-Learn, Git, Jira, Docker, FastAPI, Flask

Leadership / Extracurricular

Machine Learning Mentor - Robotics Club IET Lucknow — September 2022 – October 2023
Mentoring over 250+ students in getting started in the field of Machine Learning.

AWS ML Summer School — September 2023 – October 2023
Among 2500 student selected after two rounds of selection process.

NIT Bhopal Hackathon — March 2023
Secured second position among 50+ qualified team.

AWS Udacity Scholarship Reciepient — November 2022 - October 2023
Selected globally to be a part of 500 people community.