Akash Mondal

akshmnd@outlook.com | +91 7095417327 | Noida, Uttar Pradesh, India
github.com/akash-mondal | linkedin.com/in/akshmnd | akshmnd.vercel.app

Experience / Internships

Stanford University , Stealth Startup
Sep. 2024 – Present
LLM Engineer — *Palo Alto , Calafornia , United States of America*

- Spearheading the development and finetuning of large language models (LLMs) using advanced Python libraries, PyTorch, and TensorFlow for enhanced creativity in long-form content generation, implementing novel Natural Language Processing (NLP) techniques including summarization, expansion, and noise injection for improved text quality.
- Leveraging deep learning and machine learning algorithms to create innovative benchmarks and metrics for assessing long-form creative content, while optimizing model performance using MLOps practices and scalable cloud-based solutions (AWS SageMaker, EMR).
- Implementing end-to-end AI/ML pipelines, from data preprocessing to model deployment, utilizing big data technologies like Hadoop and Spark for efficient data handling and analysis in large-scale NLP projects.

Samsung R&D Institute India - Bangalore
Sep. 2024 – Mar. 2025
Generative AI Intern — *Bangalore, Karnataka, India*

- Leading the development of cutting-edge multi-modal Generative AI solutions for smart home intelligence, integrating computer vision and NLP techniques to process various input modalities (image, video, audio, text) using state-of-the-art machine learning frameworks (PyTorch, TensorFlow, scikit-learn).
- Engineered and optimized AI/ML pipelines using advanced MLOps practices, including containerization (Docker) and cloud deployment (AWS), focusing on scalability and multi-lingual support for product launch at scale.
- Implemented and fine-tuned complex deep learning models, leveraging GPU acceleration and distributed computing techniques to enhance performance and reduce training time for large-scale AI systems.

Yash Technologies
Feb. 2024 – Apr. 2024
Data Science Intern — *Indore, Madhya Pradesh, India*

- Engineered an end-to-end State-of-the-Art Virtual Try-On (SOTA VTON) solution, leveraging advanced deep learning techniques (image segmentation, Stable Diffusion, ControlNet) and finetuning diffusion models using PyTorch and TensorFlow for enhanced performance and accuracy.
- Implemented robust MLOps practices for seamless deployment on AWS GPU clusters, utilizing Docker, AWS EMR, and custom CI/CD pipelines for scalable data processing and model serving, demonstrating proficiency across all stages of AI engineering from ideation to production.
- Optimized data pipelines using Spark and Hadoop for efficient processing of large-scale image datasets, significantly improving model training speed and overall system performance.

Bharat Heavy Electricals Limited (BHEL)
Aug. 2023 – Sep. 2023
DataCenter Intern — *Hyderabad, Telangana, India*

- Developed and implemented a sophisticated real-time Temperature Monitoring and Control System for data centers, leveraging Java, JSP, and IoT sensors to collect and process high-volume, high-velocity sensor data.
- Designed and optimized a robust Oracle database schema to handle time-series data efficiently, implementing advanced indexing strategies and partitioning techniques to ensure fast query performance on multi-terabyte datasets.

Education

B. Tech (CSE) Cyber Physical Systems, Vellore Institute of Technology, Chennai (2021-2025)

Achievements

Winner of Yash Technothrive23: National Level Hackathon Gen AI

Honorary Runner-Up in Intel® X Awiros App-a-thon 2.0: National Level Computer Vision Hackathon

Winner of Valeo Sustainability Hackathon: Conducted by Valeo in Collaboration with VIT Chennai

Secured Top 10 in Student Innovation Festival: ISRO Space Hackathon

Winner of Samsung PRISM GenAI Hackathon

Projects

StellarFrames: Led the development of an innovative project focused on creating hyper-personalized advertisements using Generative AI, winning a national level hackathon.

Dark: Developed a scalable ecosystem to identify and mitigate dark patterns in eCommerce websites using AI and generative AI techniques. Conducted in collaboration with VIT University (Chennai Campus) and IIT Varanasi (BHU).

SHRESHTH: Created a voice-activated assistant for ISRO using Retrieval Augmented Generation for QnA on provided documents. Integrated ASR, LLM, NMT, and Text-to-Speech synthesis.

Seamless AI: Developed a suite combining NLP, computer vision, and multimodal capabilities to support interactions in 11 Indian languages. FineTuning and Integrating SOTA LLM , ASR Models