Akash Mondal

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Experience / Internships

Yash Technologies, Indore, Madhya Pradesh , India (Feb. 2024 – Apr. 2024) (Data Science Intern):

Developed a State-of-the-Art Virtual Try-On (SOTA VTON) web application using Streamlit, enabling users to virtually try on garments on model images and search for garments from various e-commerce websites.Implemented a multi-view diffusion model to generate GIFs showcasing output images from different angles, enhancing user experience and visualization (Novel View Generation). Utilized various deep learning techniques including image segmentation (Hugging Face SegFormer model), Stable Diffusion inpainting models with ControlNet, and IDM-VTON for accurate and realistic virtual try-on results.

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

Collaborated with a cross-functional team to implement a Temperature Monitoring and Control System for data centers. Utilized NetBeans, Java, and JavaServer Pages (JSP) to develop a robust system for real-time temperature monitoring. Integrated Internet of Things (IoT) sensors and Arduino microcontrollers to collect data and ensure optimal operating conditions. Maintained and managed Oracle Database for storing temperature data and generating reports.

MathWorks (May. 2023 – Sep. 2023) (Machine Learning Intern):

Independently learned and implemented machine learning techniques, particularly using MATLAB for image processing, signal processing, and deep learning. Developed a strong understanding of MATLAB and its applications in the fields of AI and machine learning. Worked remotely, demonstrating self-motivation and a dedication to acquiring new skills and knowledge.

Education

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

Location: Chennai, Tamil Nadu

Achievements

Winner of Yash Technothrive23: National Level Hackathon on Generative AI

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

Secured Top 10 in Student Innovation Festival: ISRO Space Hackathon

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

Winner of Samsung PRISM GenAI Hackathon

Projects

Project: StellarFrames (Aug. 2023 - Sep. 2023):

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

Project: Dark (Jan. 2024):

Developed a scalable ecosystem aimed at identifying and mitigating dark patterns in eCommerce websites. Utilized AI and generative AI techniques to analyze and detect manipulative design patterns. Conducted the project as part of an initiative with VIT University (Chennai Campus) and IIT Varanasi (BHU).

Project: SHRESHTH (Oct. 2023 - Jan. 2024):

Created a voice-activated assistant for Indian Space Research Organization (ISRO) that uses Retrieval Augmented Generation for performing QnA on provided documents. Integrated Automatic Speech Recognition (ASR), Large Language Models (LLM), Neural Machine Translation (NMT), and Text-to-Speech synthesis.

Project: Seamless AI (Jun. 2023 - Aug. 2023):

Developed Seamless AI, a suite combining NLP, computer vision, and multimodal capabilities to support interactions in 11 Indian languages. Integrated models like Mixtral 8x7B for text generation, Bhashini Suite for ASR and NMT, and FireLLaVA 13B for multimodal processing. Winner of Samsung PRISM GenAI Hackathon.

Additional Information

Languages: English, Hindi, Bengali