

Contact

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Top Skills

Arduino IDE
arduino nano
tensorflow lite

Gagneet Singh

AI | Advanced NLP | LLM | Ex-Research Intern @ IIT-Jammu | Ex-ML Intern @ Infowiz | Data Science | ML | DL
Chandigarh, Chandigarh, India

Summary

Hi, I'm Gagneet Singh, an undergraduate at Panjab University specializing in AI and Machine Learning. My passion lies in leveraging cutting-edge technologies to solve real-world problems, with a focus on TinyML, deep learning, and Generative AI. I have honed my skills in TensorFlow, PyTorch, TensorFlow Lite, Python, and MLOps tools like MLflow, AWS, DagsHub, and GitHub Actions.

During my research internship at IIT-Jammu, I led a TinyML project using Arduino Nano, creating a detailed Hindi alphabet dataset to advance regional language recognition. This project deepened my expertise in embedded AI applications. Additionally, I developed an Automatic Speech Recognition (ASR) model for Punjabi at Panjab University, tackling dialect challenges and optimizing performance through extensive dataset curation and model refinement.

I have built a strong foundation in MLOps, machine learning, and embedded AI. My recent exploration into Generative AI and Large Language Models (LLMs) showcases my commitment to staying at the forefront of AI advancements.

I am actively seeking opportunities for internships and jobs where I can apply my skills and continue to grow in the AI field. I am open to connecting with professionals and organizations interested in exploring innovative AI solutions.

Let's connect to discuss potential collaborations, research opportunities, or roles where I can contribute my expertise and enthusiasm for AI.

#TinyML #MachineLearning #DeepLearning #GenerativeAI #LLMs
#AWS #MLOps

Experience

IIT Jammu

Research Intern

June 2024 - Present (4 months)

Jammu, Jammu & Kashmir, India

During my research internship at IIT Jammu, I spearheaded a TinyML project utilizing Arduino Nano to create an extensive dataset of Hindi alphabets. I employed TensorFlow and TensorFlow Lite to develop and optimize a real-time character recognition model, ensuring efficient performance on embedded devices. My work included data collection, model training, and deployment, leveraging tools such as Arduino IDE and various machine learning libraries. This internship significantly bolstered my expertise in embedded machine learning, practical AI applications, and hands-on experience with cutting-edge technologies.

UIET Panjab University

Research And Development Intern

March 2024 - Present (7 months)

Chandigarh, India

As part of my research internship at Panjab University, I developed an Automatic Speech Recognition (ASR) model for the Punjabi language. This project involved designing both pretrained and custom ASR models to enhance speech recognition accuracy for Punjabi speakers. I conducted extensive experiments to optimize model performance and fine-tuned the algorithms to improve their ability to handle various speech patterns and accents. The project not only advanced the state of ASR for regional languages but also contributed to the development of more inclusive and accessible technology for Punjabi-speaking communities.

INFOWIZ

Machine Learning Intern

June 2023 - Present (1 year 4 months)

Chandigarh, India

As a Machine Learning Intern at INFOWIZ, Developed a predictive model for sleep staging and respiratory disorder detection using EEG data from St. Vincent's University Hospital / University College Dublin. Leveraged advanced machine learning algorithms to classify sleep stages and annotate respiratory events such as apneas and hypopneas with high accuracy. Enhanced the model's performance by analyzing the correlations between sleep stages and respiratory anomalies, significantly boosting its predictive capabilities for sleep disorders

Education

Panjab University, Chandigarh

Bachelor of Engineering - BE, Information Technology · (2021 - 2025)