

BARATH MADESH

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OBJECTIVE

Software Engineer specializing in Generative AI, with expertise in Natural Language Processing (NLP), Transformers, and Large Language Models (LLMs). AWS Certified Cloud Practitioner with hands-on experience in developing and deploying machine learning models using TensorFlow, Hugging Face, and RAG (Retrieve, Augment, Generate) systems. Passionate about building AI-driven applications to solve complex challenges and drive real-world impact through innovative solutions.

EDUCATION

Bachelor of Technology in Biotechnology, Vellore Institute of Technology 2020 - 2024

GPA: 8.26/10

Relevant Coursework: Machine Learning, Data Science, Deep Learning, Natural Language Processing

SKILLS

Programming Languages	Python, Java
Generative AI Skills	Transformers, Hugging Face, TensorFlow, RAG (Retrieve, Augment, Generate)
NLP	Self-attention Mechanism, BERT, GPT, LLM models
Cloud Technologies	AWS (Lambda, EC2, S3), Docker
Other Tools	Git, GitHub, Linux, Postman

EXPERIENCE

Software Engineer Intern Jun 2024 - present

Kramah Software, Bengaluru, India

- Developed an AI-powered SQL chatbot using Hugging Face's pre-trained models to transform natural language queries into executable SQL commands.
- Contributed to a full-stack project—NIRF Rank Predictor—by implementing machine learning algorithms on 20 years of ranking data.
- Derived mathematical formulas for key ranking parameters and integrated them into an AI prompt to deliver customized insights for colleges.

AI Engineer Nov 2024 - Jan 2025

Assisto Technologies Private Limited, Noida, India

- Spearheaded a speech-to-text project by designing a hybrid model integrating wav2vec2 and Whisper for improved transcription accuracy.
- Overcame technical challenges such as layer freezing and architecture harmonization to develop a robust system achieving 94% accuracy.
- Led data collection, preprocessing, and training, surpassing OpenAI Whisper's benchmark and validating the model's effectiveness in real-world applications.

Data Analyst Mar 2022 - Sep 2022

Edu-Versity, Bengaluru, India

- Gained hands-on experience in data analytics, driving insights to support business decision-making.
- Worked with large datasets and performed statistical analysis to enhance data-driven strategies.

PROJECTS

SQL LLM Model for Automation

2024

Developed an SQL automation model that enables users to query databases using simple English sentences. Utilized Hugging Face transformers, LLaMA model, and LLaMA Factory for fine-tuning the model. Implemented prompt engineering techniques to enhance the accuracy of results.

Project link: [Ki-Chat](#)

Fruits Disease Detection App

2023

Developed an AI-powered disease prediction app using Vision Transformer (ViT) and VGG19 models to detect microbial contamination in strawberries. Deployed a real-time web interface using Flask, improving food safety and enhancing supply chain transparency.

Project link: [Fruits-Disease-Detection](#)

E-Commerce Website

2023

Built a website for connecting farmers and customers using MongoDB, Express, ReactJS, and NodeJS. The Farmers and Customers E-Commerce Website connects farmers directly with consumers, providing a digital marketplace for locally sourced produce to meet the growing demand for fresh, high-quality goods.

Project link: [E-commerce](#)

CERTIFICATIONS

AWS Certified Cloud Practitioner

[View Certification](#)

Data Science with Artificial Intelligence

[View Certification](#)

CS50

[View Certification](#)