PRAGATEESHWARAN

CONTACT

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Sivakasi, Tamil Nadu, India

EDUCATION

Bachelor of Technology
Artificial Intelligence and Data Science
MEPCO SCHLENK ENGINEERING COLLEGE, SIVAKASI
2022 - 2026

Higher Secondary Education
K.KAMARAJAR MATRICULATION HIGHER SECONDARY SCHOOL, Sivakasi
2022

SKILLS

Programming Languages

- Python
- C/C++
- CUDA
- JavaScript

LLM Framework

- Langchain
- llamaIndex

Deep Learning Frameworks

- PyTorch
- TensorFlow

DataBase

- MySQL
- Apache Cassandra
- MongoDB
- Neo4j

Containerization

- Docker

Cloud

- Microsoft Azure

ABOUT ME

I am a passionate deep learning researcher dedicated to developing cutting-edge large language models (LLMs) and advancing AI architectures. My expertise lies in autonomous research, designing innovative machine learning methodologies, and optimizing model performance. With a strong mathematical foundation, I focus on creating efficient, scalable AI solutions while emphasizing research-driven innovation.

PROJECT

ViT-For-Image-Classification

A ViT-based image classifier, processing images as patches, trained on large datasets, and optimized performance against CNN models.

Repo link : link

LoRA-From Scratch

This project implemented a Low-Rank Adaptation (LoRA) technique from scratch for fine-tuning a neural network on the MNIST dataset. It covers the model setup, adaptation process, and a comprehensive training pipeline, including optimization, loss functions, and evaluation metrics for efficient model fine-tuning.

Repo link : link

LLaMa-3 From Scratch

This project implemented a Low-Rank Adaptation (LoRA) technique from scratch for fine-tuning a neural network on the MNIST dataset. It covered the model setup, adaptation process, and a comprehensive training pipeline, including optimization, loss functions, and evaluation metrics for efficient model fine-tuning.

Repo link : link

GPT-2 From-Scratch

This Project uses PyTorch to build and train a OpenAI's GPT-like language model for text generation. It includes data preprocessing, defining model architecture with multi-head attention and feedforward layers, training with backpropagation, and text generation using the trained model.

Repo link : link

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PROJECT

Vanilla Decoder

This Project is the implementation of a Vanilla Transformer Decoder Block built using PyTorch.

Repo link : link

QueryGen

QueryGen was a Streamlit application that allowed you to generate SQL queries based on natural language prompts and CSV file inputs. It used LangChain's SQL query generation capabilities and the ChatGroq language model to interpret user prompts and generate optimized SQL queries tailored to the uploaded CSV data.

Repo link : link

Deep Face Detection

This project implemented a deep learning model using TensorFlow for face detection. It involved data preprocessing, augmentation, and training a VGG16-based model. The model was trained to classify and localize faces in images, with real-time predictions visualized through OpenCV

Repo link : link

Comment Analyzer

It built a neural network, trained it on labeled comments, and included a Tkinter GUI for predicting toxicity of input sentences. The model was saved and loaded using the HDF5 format, though a native Keras format was recommended.

Repo link : link

CERTIFICATES

NPTEL - Responsible & Safe AI Systems

Jul-Oct 2024 Link

NPTEL - Programming With Java

Jan-Apr 2024 Link

NPTEL - The Joy Of Computing Using Python

Jul-Oct 2023 Link

UDEMY - Python for data science and Machine learning bootcamp

Oct-2023 Link

EXPLORE IT CORP - Python in artificial intelligence, Machine learning and data science

Sept - 2022 Link

LANGUAGES

Tamil

English
