Gosula Sunandini
Mobile No.: +91-6362312286
E-mail: gsunandhini@gmail.com
LinkedIn: www.linkedin.com/in/gosula-sunandhini-77803513b
GitHub: https://github.com/sunandhini96
Portfolio website: https://main--celadon-palmier-0ee032.netlify.app/

Career Objective:

I am a masters graduate in data science looking for an opportunity to contribute in AI/ML domain as a Data Scientist or Machine Learning engineer by developing cutting-edge products.

Professional Summary:

- Data Analyst Intern in Nokia: 6 months (Aug-2022 to Jan-2023)

Technical Skills:

Programming languages	Python, SQL, C/C++, Java
Technologies	Machine Learning, Deep Learning, Natural Language processing, Computer vision, Reinforcement learning, Generative AI, Large Language Models, MLOps, Data Analytics
Tools	Matlab/Simulink, Kubernetes, Jenkins, Docker, Grafana, Kibana, Key cloak, Microsoft Power BI, Excel, Huggingface, Streamlit, Arduino tools
Python Libraries	Numpy, Pandas, Matplotlib, Scipy, SciKit-Learn, NLTK, Pytorch, Tensorflow, Keras, Opencv, Kivy
Version Control	Git/Gerrit
Project management method	Agile (Jira)
Unit testing	Pytest, Gtest/Gmock
Front end	HTML/CSS/JS, React
Backend	Flask, Django, Rest API development
Cloud	AWS Sagemaker

Projects:

1. **Project** : Multi Modal Large Language Model (MMLLM) pre-training and fine tuning
   Languages/ Tools : Python, Google Colab for training, Huggingface for deployment, Gradio
   Hugging face link : https://huggingface.co/spaces/Gosula/MultimodalLLM

Project Summary:

Goal : Building a Multi-Modal Large Language Model for Text generation
Inputs : text, images, and audio
Output : generate textual data
Dataset : COCO-2017 dataset for images, Instruct 150 K dataset
Models : Foundation model (Microsoft Phi-2 LLM), Clip Model, Whisper model
Fine tuning : Qlora

Project Description:

- This project involves a three-stage process to create a Multi-Modal Large Language Model.
- **Stage 0**: **Pretraining**
  - Foundation Model: Microsoft Phi-2 LLM (Text input and Text output)
  - Clip model as Image encoder for getting embeddings from input images (COCO-2017 dataset). Then we trained the projection layer and projection model to convert above embeddings to be compatible with the Microsoft Phi-2 model.
- **Stage 1**: **Finetuning**
  - Performed fine-tuning on projection layer, projection model and Phi-2 model using Instruct 150 K dataset, enabling the model to understand conversations from images.
  - Adopted the Qlora fine-tuning strategy, we optimize the phi-2 model for multi-modal tasks, enhancing its ability to process text, images and audio.
- **Stage 2: Deployment**
  - Utilized whisper model for audio data
  - Deployed in Hugging face

2. **Project** : Microsoft Phi-2 Based AI Assistant using Qlora strategy
Languages : Python, Google Colab for training, Huggingface for deployment, Gradio
Huggingface link: https://huggingface.co/spaces/Gosula/ai_chatbot_phi2model_qlora

Project Summary:

Goal : AI Assistant / Chatbot
Inputs : text
Output : generate textual data
Dataset : Open Assistant dataset
Models : Foundation model (Microsoft Phi-2 LLM)
Fine tuning : Qlora

3. **Project** : Convolution-free Transformer based DeepLabV3+ (Trans DeepLab) for semantic segmentation of waterbodies in satellite images.
Languages : Python, Tensorflow, Pytorch

Project Summary:

Goal : Semantic segmentation of water bodies from satellite images
Inputs : satellite images
Output : segmented images with water bodies
Dataset : Kaggle RGB sentinnel-2 A/B dataset
Models : DeeplabV3+, Trans deeplab

Technical Publications

Publication Name : SPIN-2023 Conference

Title : Significance of Atrous Spatial Pyramid Pooling (ASPP) in DeeplabV3+ for water body segmentation.

Publication Link: https://ieeexplore.ieee.org/document/10116882

Academics

Degree	Specialization	College	Duration	Percentage/CGPA
Master of Technology	Data Science	Center of Excellence in Networking (CEN), Amrita Vishwa Vidyapeetham, Coimbatore, Tamil Nadu, India. 641112	2021-2023	8.14/10
Bachelor of Technology	Electrical and Electronics Engineering	Sree Vidyanikethan Engineering College (Autonomous), Tirupati, Andhra Pradesh, India. 517102	2014-2018	8.5/10
Intermediate	MPC	Narayana Junior College, Nellore, Andhra Pradesh, India.	2012-2014	96.9
High School	NA	SSVVN High School, Chinna guruvaluru, Chapadu, Kadapa, Andhra Pradesh.	2012	9.2/10

Continuous Learning / Certifications

1. Udacity – Data Analysis and Visualization with Microsoft PowerBI (3 months)
2. Data camp - Python Developer (2 months)
3. The school of AI – Extensive & Reimagined AI (ERA-V1) Program 2023 (9 months)
4. The school of AI – Extensive Vision AI (EVA 8) Program 2023 (9 months)

Personal Details:

Full Name	: G o s u l a S u n a n d i n i
Date of birth	: 02/ 07/ 1997
Gender	: F e m a l e
Blood group	: O +
Languages Known	: English, Telugu, Hindi, Kannada