SARATH CHANDRA BANDREDDI

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PROFESSIONAL SUMMARY

A highly motivated and innovative fresher, seeking a challenging role in **Python development**, **Artificial Intelligence**, and **Django web application development**. Proven skills in **machine learning, deep learning, generative AI** and building robust web applications. Dedicated to continuous learning and staying abreast of the latest **industry trends** and emerging technologies. Eager to contribute to **cutting-edge** software solutions and thrive in a **collaborative team environment**.

TECH STACK

- **Languages** : Python, Java
- **Scripting** : Shell Scripting
- **Markup Languages** : HTML, CSS, Jinja Coding
- **Operating Systems** : Linux, Windows
- **Libraries/Frameworks** : TensorFlow, Keras, LlamaIndex, Ollama, OpenCV, Sklearn, Numpy, Pandas, Django, Gradio
- **Tools / Platforms** : Kaggle, Google-Colabs, Git, GitHub, AWS (Bedrock), Figma
- **Databases** : MySQL

WORK EXPREANCE

BLDX **Dec 2024 – Present**

AI Engineer Intern

- **Designed and enhanced** algorithms for **processing complex construction drawings**, enabling **accurate** user query responses. Utilized **Amazon Bedrock** services, specifically **Claude-3-5-Sonnet (VLM)**, ensuring **data privacy and security**.
- D**eveloped a recommendation system to optimize AI search capabilities**, improving **efficiency in data retrieval**.
- **Worked** on project management schedules, **generating insights and providing optimization recommendations** using **Claude-3-5-Sonnet (VLM)**.

PROJECT PROFILE

DearHRSpeakWithMy2.0 (🤗 LINK) - Individual Project   **Llama3-8B | Gradio | LLM | NLP | HuggingFace**
- **Developed** an AI-powered **chatbot** for HR interview support, serving as a virtual personal assistant to present a candidate's **key skills, projects**, and **experience** in a structured, professional format.
- **Implemented** a robust **question-and-answer functionality**, ensuring **accurate** chatbot responses aligned with the candidate's **profile and objectives**.
- **Integrated** on Hugging Face with **Llama3-8B**, enabling a tailored and interactive experience through Gradio to guide conversations towards the candidate's strengths.

Document Query AI Agent (🤗 LINK) **-** Individual project   **Vextor Embedding| HuggingFace | LlamaIndex | Gradio**
- **Created** an AI chatbot for **document-based Q&A** utilizing **Llama3-8B**, **Mistral-8x7B** and other popular LLMs for **cutting-edge** natural language processing.
- **Integrated Llama Indexing** for **efficient data retrieval** and **robust document parsing** within an **intuitive user interface**.
- **Combined** various embedding generation techniques with a **resilient query retry mechanism**, boosting **data accuracy** and **system reliability**.

AI Agent Nexus (🤗 LINK**) -** Individual project   **CrewAI | Gemini LLMs | Multi Agents | Agentic Tools**
- **Developing** an intelligent suite of **AI agents** to automate SEO-optimized content generation, game development, and marketing content creation using Gemini LLMs and Serper API and adding more AI agents.
- **Implemented** a structured workflow for the **SEO Content Generator Agent**, enabling real-time data collection and high-quality article drafting.
- Automated game development in Python with multi-level quality control, supporting various game genres and ensuring error-free, optimized game logic.

SCRAM (🐱 LINK) - Minor project   **Gemini-pro (LLM) | Tensorflow | Keras | OpenCV | Django**

- **Engineered** a robust, **secure Django-based system** for comprehensive college resource and access management, incorporating advanced features such as user management, complaint registration, and a chatbot assistant. Seamlessly **integrated Gemini-Pro LLM** and introduced face recognition technology for enhanced attendance tracking.
- **Devised** robust **user authentication** and **2-FS password authentication**, enhancing **system security and reliability**.
- **Led the project team**, developing **comprehensive Django templates**, seamlessly **integrating custom chatbot functionalities** using LLM and created a one short **face recognition** for **attendance management** system.

FACE RECOGNITION VGGFace (🤗 LINK) - Individual project   **Tensorflow | Keras | OpenCV | Gradio**

- **Developed** a **face recognition application** utilizing the **VGGFace architecture with TensorFlow**, achieving **exceptional accuracy** on a bespoke 29-class dataset and deployed on an online server using Hugging Face Space.
- **Mastered** creating **custom datasets** using **OpenCV**, organizing training and test sets, and achieving **97.86% accuracy** in facial recognition.
- **Trained deep learning models** for **image classification**, leading to the publication of two papers in peer-reviewed journals focused on advancements in **facial recognition technology**.

The Linguistic Lens Application (🤗 Link) - Individual project   **Gradio | PaddleOCR | GoogleTranslator | gTTS**

- **Developed** a multi-functional platform to bridge **language barriers** by integrating **Optical Character Recognition (OCR)**, **translation**, and **text-to-speech (TTS)** features for real time text extraction from images
- **Utilized PaddleOCR** for **precise text extraction**, **GoogleTranslator** for wide-ranging language support, and **gTTS** for **clear audio conversion** in multiple languages.
- **Created a scalable, modular architecture** that enables **seamless user experiences and adaptability**, enhancing accessibility for multilingual interactions.

Object Segmentation & Comparison Script (📄 LINK) - Individual work   **OpenCV | scikit-image | YOLOv8 | Sklearn**

- **Built** a Python script for image processing tasks such as **object segmentation** using **YOLOv8**, and image similarity measurement with SSIM, utilizing **OpenCV** and **scikit-image**.
- **Implemented** functionalities including **grayscale contrast enhancement** and **object segmentation**, showcasing the script's capabilities through comprehensive evaluation and visualization.
- **Mastered** object segmentation techniques with **YOLOv8**, enhancing **object recognition precision**.

EDUCATION PROFILE

Course	Institution	CGPA	Duration
B.Tech-CSE (AI & ML)	VVIT-Vasireddy Venkatadri Institute of Technology	8.59	2021-2025
12th class	Narayana Junior College	9.22	2018-2020
10th class	Narayana High School	9.7	2017-2018

CERTIFICATION DETAILS

- ➤ **Python Programming**   : **Kaggle, SoloLearn, HackerRank, GUVI**.
- ➤ **Machine Learning**   : **Coursera, Kaggle, Microsoft, IBM**
- ➤ **Deep Learning**   : **Kaggle, NPTEL, OpenCVUniversity, IBM**.
- ➤ **Google Skill Boost**(profile) : Introduction to Gen AI LP, Gemini for Google Cloud LP, Gen AI for Developers Learning Paths.
- ➤ **Django**   : **Microsoft**
- ➤ **AWS**   : **AWS Academy Cloud Foundations, AWS Academy Cloud Architecting**
- ➤ **NPTEL** (exam)   : **Java (ELITE), Data Science (ELITE + SILVER), Deep Learning**

ACHIEVEMENTS

Secure runner up in a Python Intramural technical fest at RVR&JC college (LINK)

INTERESTS

Reading, exploring on new courses and content related to AI, learning usage of new AI tools, Sketching.

PERSONAL DETAILS

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