T Sumith Kumar

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PROFESSIONAL SUMMARY

An enthusiastic and dedicated Software Developer with a strong focus on Python, passionate about crafting innovative and userfriendly solutions that solve realworld problems. Experienced in building and maintaining applications using Python frameworks like Django, Flask, I take pride in writing clean, efficient, and maintainable code that delivers value.

I thrive on problemsolving, whether it's optimizing performance, or integrating thirdparty tools to enhance functionality. Beyond the technical aspects, I'm a team player who enjoys collaborating with diverse groups to turn ideas into tangible results.

With a blend of technical expertise and a creative mindset, I aim to deliver software solutions that not only meet requirements but also delight users. I'm passionate about making a difference through technology and contributing to meaningful projects that impact lives.

EDUCATION

Bachelor of Engineering (Electronics and Communication Engineering)   2020 - 2024
Centurion University of Technology And Management.   Grade: 8.64/10.0

PROJECTS

Linkedin Post Genrator using LLM(llama-3.1) and streamlit: January 2025

An advanced language model, to analyze and replicate the writing style of LinkedIn influencers. By preprocessing and fine-tuning data from 100 to 200 posts, our system generates new LinkedIn posts directly inspired by their established content. This innovative solution integrates Python for backend development and Streamlit for an intuitive user interface, displaying generated posts in both English and Hinglish (a blend of Hindi and English).

Project Workflow:

1. **Data Collection & Preprocessing**:
   - collect **100 to 200 posts** from top LinkedIn influencers.
   - The data undergoes **preprocessing** to clean and structure it for model training.

2. **Fine-Tuning & Post Generation**:
   - The **Llama-3.1-8B-Instant** model is fine-tuned on the influencer's writing style.
   - It generates **new LinkedIn posts** that closely match the influencer's tone and style.
   - Posts can be generated in **English** and **Hinglish** (a mix of Hindi & English).

3. **User Interface with Streamlit**:
   - The generated posts are displayed on an intuitive **Streamlit-based UI**.
   - Users can review, edit, and refine the AI-generated content before posting.

Tech Stack:

- **Large Language Model (LLM)**: Llama-3.1-8B-Instant
- **Programming Language**: Python
- **Framework**: Streamlit (for UI)
- **Machine Learning**: Fine-tuning LLM on influencer data

Raspberry-pi Agrobot: march 2024

A machine learning-based robot using Raspberry Pi to detect plant diseases and analyze their causes with high accuracy.

How It Works:

- **Image Processing & Analysis**: Captures plant images and extracts features using **VGG16**.
- **Deep Learning Models**:
   - **CNN** classifies plant diseases based on visible patterns.

o **RNN** analyzes sequential symptoms for better diagnosis.
- **Real-Time Monitoring**: Provides **early disease detection** and insights to farmers.

Tech Stack:
- **Hardware**: Raspberry Pi
- **ML Models**: VGG16, CNN, RNN
- **Programming**: Python

This **cost-effective and portable** solution enhances **precision agriculture**, helping farmers ensure healthier crops and sustainable farming

Extractive text summarization
August 2023

A machine learning-based tool using Natural Language Processing (NLP) to summarize textual data efficiently.

How It Works:
- **Text Analysis**: Identifies and extracts the most relevant sentences or phrases.
- **Preserves Original Meaning**: Generates summaries without altering structure or content.
- **High-Volume Processing**: Ideal for **document analysis, news aggregation, and research**.

Tech Stack:
- **Technology**: Machine Learning, NLP
- **Programming**: Python

This AI-driven tool provides **quick and accurate summaries**, enhancing decision-making and efficiency.

CERTIFICATIONS/Achivemants

Introduction to AWS IoT Analytics' course, AWS

⬡ **Course Completion**: "I earned a certificate in 'Introduction to AWS IoT Analytics' from AWS."

⬡ **Skills Gained**: "Developed a solid understanding of IoT analytics on the AWS platform."

⬡ **Practical Knowledge**: "Learned how to use data effectively to drive innovation and improve efficiency in IoT solutions."

⬡ **Focus Area**: "Explored cutting-edge IoT analytics techniques in this fast-paced and evolving field."

Introduction to AWS Greengrass for Raspberry Pi certification, AWS

⬡ **Project Description**: "Implemented AWS Greengrass for Raspberry Pi IoT Integration"

⬡ **Skills Demonstrated**: "Proficiency in AWS IoT, Greengrass, and edge computing"

⬡ **Achievements**: "Enabled efficient data processing and analysis at the edge"

⬡ **Impact**: "Contributed to innovation in IoT and cloud computing domains"

Generative AI course on Coursera! , Coursera

⬡ **Course Completion**: "I'm thrilled to have completed the Generative AI course on Coursera!"

⬡ **Skills Acquired**: "This journey helped me build a solid understanding of generative models, like GANs and VAEs."

⬡ **Practical Knowledge**: "I got hands-on experience creating projects that focused on image synthesis and text generation."

⬡ **Focus Area**: "It was fascinating to explore how Generative AI can address real-world challenges in both creative and analytical spaces."

SKILLS

Computer Languages: Python(Numpy,pandas,Pytorch,Tensorflow,Open Cv),C/C++,Html,Css.
Tech-Stack/Databases: Data Structure and Algorithim , Mongo DB , MySQL ,Langchain,Gen Ai , flask ,Git,Github,Docker.
Soft Skills: Communication Skills, Interpersonal communication,Time Management.
Other Skills: Power BI, Microsoft Office,Microsoft Excel.

EXTRA-CURRICULAR ACTIVITIES

Member, College Coding Club

Participant, Annual Tech Fest Hackathon