Surendra Kumar

Indian Institute of Information Technology, Una

Sardarshahar, Churu- 331403, Rajasthan, India

+91-9799657289 • skdhaka207@gmail.com

www.linkedin.com/in/surendra-kumar-51802022b

www.github.com/Surendradhaka123

Education

Program	Institution/Board	%/CGPA	Year
B.Tech. (Electronics and communication Engg.)	Indian Institute of Information Technology *Una, Himachal Pradesh*	**8.75/10**	2021-Present
Senior Secondary	Board Of Secondary Education *Rajasthan, Ajmer*	**95.20%**	2020
Secondary	Board Of Secondary Education *Rajasthan, Ajmer*	**82.00%**	2018

Experience

1. *AI development intern(Spotspreads, Singapore)* **Jan. 2024 - present**

langchain, OpenAI, llms, RAG, langchain agents, Vector Databases

- Led the creation of an AI-powered DeFi aggregator on Aptos blockchain, ensuring global accessibility. Fine-tuned large language models for generating the responses in structured format and addressing user queries. Worked on langchain agents to interact with external APIs for realtime information retrieval. Implemented the RAG pipeline for information retrieval from websites and Google Search result using Vector Databases.

2. *Research Intern (IIT Mandi)* **Aug. 2023 - Dec. 2023**

Python, Scikit-Learn, NumPy, Pandas, Matplotlib, Seaborn, Beautiful soup, Statistical Analysis

- Engaged in a multi-label classification project in the field of olfactory research and another project. Responsibilities include data collection, cleaning, and visualization. Implemented machine learning and deep learning algorithms to achieve project objectives. Also performed the saliency analysis using Grad-CAM++.

Projects

1. *Conversational AI - Chatbot* **May 2023**

Python, llama-index, langchain, OpenAI API, Streamlit Cloud, Google Colab, GitHub

- Developed an **AI ChatBot** using llama-index, langchain and OpenAI API. Model is trained on a cooking interview dataset. This chatbot is able to search over the internet and has vast knowledge of recipes.

2. *Driver Drowsiness Detection using Computer Vision* **March 2023 - April 2023**

Python, TensorFlow, Keras, OpenCV, Pygame, NumPy, Matplotlib, Streamlit Cloud

- Developed a **real-time** driver drowsiness detector using CNN and transfer learning with **efficientNet B5**. It evaluate the state of driver in real-time using web cam. It extracts the face from each frames and predicts the output whether the person is drowsy or not. If the driver continuously closes his/her eyes for a fixed time limit then it raises an alarm. If the driver awakes after the activation of alarm then the alarm will be automatically gets turned off.

Coding Profiles

- *LeetCode*
- *CodeChef*

Technical Skills

- Programming Language: Java, Python, C, SQL.
- Cloud Technology: GCP, Azure, AWS.
- Database: MySQL, Vector Databases
- Framework/Libraries: Scikit-Learn, TensorFlow, PyTorch, OpenCV, Transformers, langchain, BeautifulSoup.
- Tools: Latex, Anaconda, Google Colab, GitHub, Hugging face, Matlab.
- Course Work: Machine learning, Artificial Neural Networks, NLP Course by Hugging Face, Master Deep Learning for Computer Vision in *TensorFlow*, Generative AI with Large Language Models by *Coursera*.