RITESH SINGH

riteshsingh9827@gmail.com | +91 95680 37394

EDUCATION

GRAPHIC ERA UNIVERSITY
B.Tech. in CSE with specialization in ML & AI
CGPA: 9.05/10
Expected June 2024 | Uttarakhand

KVM PUBLIC SCHOOL
CBSE (CLASS XII)
Percentage: 94.8%
2020

SKM SR. SEC. SCHOOL
CBSE (CLASS X)
Percentage: 82%
2018

LINKS

Github:// quirrelHK
LinkedIn:// riteshsingh

COURSEWORK

UNDERGRADUATE

Data Structures & Algorithms
Machine Learning
Artificial Intelligence
Deep Learning
Design & Analysis of Algorithms
Database Management System
Object Oriented Programming
Operating Systems
Computer Networking

SKILLS

PROGRAMMING & TOOLS

Languages:
Python
C++
HTML

Tools & Framework:

Django	TensorFlow/Keras
Pandas	Scikit-learn
Git	matplotlib
NumPy	LangChain
Docker	LlamaIndex
PyTorch	Ollama
OpenCV	FastAPI

Database:
PostgreSQL
MySQL

EXPERIENCE

IIT ROORKEE | Research Intern
May 2023 - Present | Roorkee, Uttarakhand

- Fine-tuned an object detection model and implemented an object tracking algorithm, **achieving an accuracy of 91%.**
- Engineered a robust algorithm using image processing techniques to extract the kinematics of vehicles. The results showed **excellent accuracy, within 5% of actual values.**
- Demonstrated strong research and analytical abilities in optimizing real-time image processing, leading to an **18% improvement in processing speed.**
- Improved the robustness of the algorithm in calculating traffic density leading to **63% less error than the previous model.**

SKY CYBERNETICS | AI Intern
June 2023 – Aug 2023 | Remote

- Trained an audio classification model to identify water wastage from a tap with an **accuracy of 76% using a novel dataset.**
- To run on edge devices, a lite version of the model was created and **deployed on a Raspberry Pi 4.**
- **Reduced processing time by 27%** by optimizing the algorithm to process in real-time.

PROJECTS

FATIGUE DETECTION | Computer Vision
February 2023 - April 2023

- Developed a web app that uses deep learning to *detect fatigue levels* in a person accurately.
- 5 CNNs were trained on different regions of interest (ROI) of a person's face, and majority voting was utilized **resulting in an accuracy of 86%.**
- After analyzing facial features the model provides a fatigue level to the user and remedies if the fatigue level is high.

VOICE SEARCH | Speech Recognition
March 2022 - June 2022

- Developed a web application that **enables voice search** functionality for searching C programs.
- Used JavaScript for the integration of Google's Speed-to-Text API, which allows users to navigate and explore C programs with the power of their voice.
- Provides real-time speech search, the web app is **deployed on Heroku.**

RESEARCH PAPER

- ITD: Indian Traffic Dataset for Intelligent Transportation Systems
  COMSNETS, 2024

POSITION OF RESPONSIBILITY

GUIDE | WeCode Club, GEHU Bhimtal

- Guided juniors in Python programming and conducted multiple teaching sessions.