KUSH OJHA

Thane, Maharashtra

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EDUCATION

Vellore Institute of Technology, Vellore - 8.81 CGPA   **2020 - 2024**
B Tech - Computer Science with Specialization in Internet of Things   *Vellore, India*

NL Dalmia Highschool   **2017 - 2019**
Class 12th - **Percentage - 94.25%**   *Maharashtra, India*

EXPERIENCE

BalkanID   **Aug 2023 – Present**
Machine Learning Engineer

- Refactored and created an API for existing RBAC algorithm and decreased its runtime by 84%.
- Decreased RAG retrieval time from 200ms to 2ms without decreasing encoded vector length.
- Worked on custom error correction algorithm for query language to fix erroneous queries generated by LLM with an F1-score of 96.24%.

Medbikri   **Aug 2022 – Oct 2022**
Data Science Intern

- Remodeled ElasticSearch algorithms to raise search efficiency to 95%.
- Trained and tested image segmentation, unwrapping, NLP and forecasting models using PyTorch with over 98% accuracy.
- Provided AI assisted UI features on light weight edge systems integrated with multi-platform apps using image segmendation.

UltraInstinct.ai   **June 2022 – Aug 2022**
Data Science Intern

- Fine-tuned a motion detection model with the help of YOLOv5n to achieve an increase in speed by 70%
- Trained and tested state of the art Pose detection models and optimized them for real-time use on edge devices.
- Dockerized CUDA enabled models for continuous integration and deployment.

PROJECTS

FOGriculture ⬈ | Tech Stack Used: Python, PyTorch, C++, Arduino/ESP32

- Monitor your soil and local weather details remotely sensed by modular sensor modules on any device
- Detects and warns about potentially harmful animals using custom trained YOLOv5s and to scares them away with an attached buzzer
- Modular architecture allowing plug and play for varying sensor modules and FEC boards and SoCs to be used to avoid vendor lock in

Violence Detection ⬈ | Tech Stack Used: Python, TensorFlow, OpenCV

- Uses skeletal key points from movenet lightning model to predict occurrence of violence in given footage
- Encorporated LSTM based model predicts violence using temporal keypoints provided.

SKILLS

- Deep Learning
- Image Processing
- Data Analytics
- NLP
- Data Science
- Machine Learning

- AWS
- Azure
- Python
- SQL
- API
- Linux

- Docker
- Java
- C++
- Neo4j
- RAG
- LLM Agents