KAINA SHAIKH

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SKILLS

- **Programming Languages :** Python | C++ | SQL | Bash Scripting
- **Tools & Libraries :** Numpy | Matplotlib | Sklearn | Pandas | Tensorflow | Pytorch | OpenCV | Streamlit | Git | Docker
- **Technologies :** Data Science | Artificial Intelligence | Machine Learning | Deep Learning | Quantum AI | Power BI | Tableau

EDUCATION

University of Pune, Bachelor of Engineering in Artificial Intelligence and Data Science — Pune , India | **2020-2024**

- **GPA : 9.4 / 10** | Academic Topper

EXPERIENCE

Defence Research and Development Organization (DRDO)

Research Intern-Applied AI and Machine Learning — *Pune* | **07/2023 - 12/2023**

- Led the team by working on the Defect Detection system using Deep Learning, improved the accuracy of the model from 87% to 98%.
- Fine-tuned the YOLOv8 algorithm by implementing it by scratch and on grayscale images.
- Compared with existing algorithms and increased accuracy in the new approach by 11%.

Amazon

Machine Learning Apprenticeship — *Remote* | **07/2022 - 08/2022**

- Implementation of core Machine Learning concepts Reinforcement Learning, Recommendation Systems, Causal Inference, Probabilistic Graphical Models, Supervised Learning, Deep Learning, Dimensionality Reduction, Unsupervised Learning.

Microsoft

Microsoft ENGAGE Intern — *Remote* | **05/2022 - 07/2022**

- Implemented Face Recognition App that works on various applications such as Smart Attendance System, Face Emotion recognition and Twitter-posts security feature.
- Focused mainly on building applications using pre-existing face recognition API by Microsoft Cognitive Services.
- Designed and developed android application integrating all the features using Microsoft Xamarin Forms.

PROJECTS

- **Cyclone Intensity Estimation** | *Python , ML , Quantum AI , Streamlit*
  - Developed a hybrid algorithm combining CNNs with Quantum Machine Learning, achieving 93% accuracy and a 25% improvement over traditional models addressing issues of misclassification and skewness.
  - Benchmarked new hybrid model against classifiers - Random Forest, SVM and Decision Trees.
  - Tested on real-time Naval Army Cyclone Infrared images and deployed as a Streamlit web app.

- **Brain Tumor Classification** | *Python , Tensorflow , Sklearn*
  - Developed hybrid approaches using EfficientNetB3+RF and VGG19+RF for brain tumor classification on MRI images, achieving 93% accuracy with VGG19+RF - a 4% improvement over KNN+SVM.
  - Feature extraction was visualized using t-SNE plots.

RESEARCH WORK & PUBLICATION

- **Deep Learning based Defect Detection and Segmentation for High Energy Material Applications**, HEMCE, DRDO
- **Brain Tumor Classification using Transfer Learning and Ensemble Approach**, ICFEEC 2024 | Link
- **Benchmarking Traditional and Graph Neural Network Models for Node Classification in Literature Characters** | Link

ACHIEVEMENTS

- **Harvard WECode Scholar :** Received Harvard Women Engineers Scholarship, Women in Technology Conference, Jan '23.
- **Google Women In Cloud Summit :** Host-participant member, Cloud Summit, Google's Women Techmakers Community.
- **Machine Learning Hackathon :** Successfully completed ML Hackathon by Leaps Analytica, Sept '21.
- **Python Programming IIT Kharagpur :** Among top 10% from India to be selected for Python Event-All Youth Symposium.
- **Qubit x Qubit by Microsoft :** Successfully completed the International Program for Quantum Machine Learning, Feb '23.