Shishir Somir Mukherjee

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Professional Summary

Computer Science Engineering undergraduate skilled in **C/C++, Python, Java, SQL.** Strong problem-solver with experience in **machine learning, data analysis,** and building **scalable systems.** Combines **low-level programming** with **data-driven** solutions for optimal performance**.**

Education

VIT Bhopal University — Bhopal, Madhya Pradesh
Bachelor of Technology in Computer Science (AI ML) — *Sep 2022 –*

Kendriya Vidyalaya No.1 Shahibaug — Ahmedabad, Gujarat
XII (Senior Secondary) — *June 2021 – July 2022*

Kendriya Vidyalaya No.1 Shahibaug — Ahmedabad, Gujarat
X (Secondary) — *June 2019 – May 2020*

Projects

Facial Detection (Med Vault) | Python, HTML/CSS, ML — Aug 2023 – Oct 2023

- Developed a facial recognition model using OpenCV and ML techniques, achieving 91.4% detection accuracy on a dataset of 1,500+ facial images.
- Built a user-friendly web interface to automate doctor access, reducing manual intervention by 40%.
- Preprocessed over 3,000 images with grayscale conversion, histogram equalization, and noise filtering to enhance input quality.

Diabetes Prediction Model | Python, KNN, XGBoost, SVM — April 2024 – June 2024

- Trained and evaluated KNN, XGBoost, and SVM models on a dataset of 7,600 patient records, achieving highest accuracy of 92.3% using XGBoost.
- Cleaned and preprocessed dataset by imputing 9.4% missing values and normalizing 16 numerical features to improve consistency and model performance.
- Conducted performance benchmarking across three ML models, reducing false positives by 12% in the final deployed pipeline.

Skin Cancer Detection Model | TensorFlow, CNN, Python — Nov 2024 – April 2025

- Engineered a convolutional neural network (CNN) using TensorFlow, achieving 95% accuracy in classifying 10,000+ dermoscopic images into 7 skin cancer categories.
- Applied advanced pre-processing techniques (resizing, normalization, and augmentation), increasing model generalization by 18%.
- Validated model performance using detailed confusion matrices and classification reports across 5 cross-validation folds.

Technical Skills

Languages: Python, C/C++, Java, OOP, SQL
Developer Tools: Github, Jupyter Notebook, VS Code, Visual Studio, PyCharm
Libraries: pandas, NumPy, Matplotlib, Sci-kit Learn, Tensorflow, STL

Achievements

- **Bug Bonanza Winner** (VIT Bhopal University, Geeks For Geeks Club, VIT)