Rohan Kharche

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SUMMARY

Results-driven Computer Science student with a strong foundation in designing data-centric solutions and building highimpact predictive systems. Experienced in developing end-to-end models for classification, forecasting, and optimization tasks, with a focus on real-world applicability, performance tuning, and cross-functional collaboration.

TECHNICAL SKILLS

Languages: Python, C++, Java, SQL

Frameworks/Libraries: Scikit-learn, TensorFlow, Pandas, NumPy, Seaborn, Matplotlib

Techniques: Machine Learning Algorithms, Feature Engineering, Statistical Analysis, Time Series Forecasting

Tools & Platforms: Flask (REST API), MySQL, Jupyter Notebook, Git

EDUCATION

VIT Bhopal University, 2023 – 2027
Bachelor of Technology in Computer Science Engineering Bhopal, India
- Cumulative GPA: 9.41

PROJECTS

Calorie Burn Estimation 03/2025 – 04/2025
[Python, Scikit-learn, XGBoost, LightGBM, CatBoost, Random Forest, Stacking Ensemble]
- Built a multi-layer regression model on 750K+ entries to predict calorie burn (R^2 = 0.997).
- Boosted accuracy by 15% using a stacked ensemble (RF, LGBM, CatBoost) with XGBoost as meta-learner.
- Optimized model for large-scale physiological data, enabling integration into fitness and wearable tech.

Solar Panel Performance Optimization 06/2025 – 07/2025
[Python, Scikit-learn, TensorFlow, LightGBM, CatBoost, Random Forest, Stacking Ensemble]
- Developed a solar panel efficiency model on 20K+ sensor records, achieving RMSE of 0.1061 via stacked ensemble (RF, LGBM, CatBoost, ANN) with Ridge meta-model.
- Improved prediction accuracy by 25% through advanced feature selection, tuning, and cross-validation.
- Enabled predictive maintenance by mitigating sensor noise and environmental variability with robust preprocessing.

Bitcoin Price Forecasting 06/2025 – Present
[Python, Statsmodels, Scikit-learn, HTML, CSS, JavaScript, Flask, Data Visualization]
- Built a SARIMA model on 83K+ records, achieving MAE of 409 (<1.5% of avg. BTC price) for short-term trend prediction.
- Enhanced model stability by 20% using temporal features and seasonal decomposition on volatile crypto data.
- Deployed a Flask app for live BTC forecasting with sub-second latency, dynamic plots, and scenario simulations.

CERTIFICATIONS

Introduction to Machine Learning 05/2025
NPTEL

Supervised Machine Learning: Regression and Classification 12/2024
DeepLearning.AI

The Bits and Bytes of Computer Networking 11/2024
Coursera

ACHIEVEMENTS

- Solved 300+ data structure and algorithms problems on platforms like LeetCode, GFG and Codeforces building a robust foundation for software development tasks.

ROLES AND RESPONSIBILITIES

Co-Lead Content Writing Team 07/2024 – Present
Open Source Club, VIT Bhopal
- Created 10+ event write-ups and promotional posts, increasing open-source club engagement by over 30%.