AAKASH DHOTRE

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PROFILE SUMMARY

Research-oriented M.Tech scholar and Data Science enthusiast with a strong foundation in Python, Machine Learning, and Generative AI. Proven track record in building predictive models with high accuracy and analyzing complex datasets. Eager to leverage skills in Deep Learning and Full Stack Development to solve real-world technical challenges.

EDUCATION

M. Tech. in Computer Science and Engineering   *2024 - Present*
Government College of Engineering, Karad | CGPA: 8.07 / 10

B.E. in Information Technology   *2021 - 2024*
Mahatma Gandhi Mission's College of Engineering | CGPA: 8.21 / 10

Class XII (CBSE)   *2017 - 2019*
St. Joseph's High School | Percentage: 63.4%

Class X (CBSE)   *2011 - 2017*
Shantiniketan Public School | CGPA: 9.2 / 10

TECHNICAL SKILLS

Languages: Python, SQL, JavaScript, PHP, HTML5, CSS3
Data Science: ML, Deep Learning, Generative AI, NLP, Pandas, Scikit-Learn
Visualization: Power BI, Matplotlib, Seaborn
Web Dev: MERN Stack (MongoDB, Express, React, Node), Bootstrap
Tools: Git, GitHub, Jupyter Notebook, VS Code, Microsoft Excel, Microsoft Word, Microsoft PowerPoint

PROJECTS

An Explainable AI-Driven Framework for Precision Agriculture (AgriSmart)
- Developed a comprehensive crop recommendation system using a Hybrid CNN-LSTM and Transformer architecture, achieving over 98% prediction accuracy.
- Integrated Explainable AI (XAI) techniques using SHAP and LIME to provide transparent, feature-level interpretations of model decisions for end-users.
- Built an interactive Streamlit dashboard featuring dual-mode analysis (Global & Regional), real-time 3D data visualization, and Partial Dependence Plots (PDP).
- Tech Stack: Python, PyTorch, Streamlit, SHAP, LIME.

Pragmatic Analysis of WhatsApp Chats using NLP
- Conducted EDA on chat data to visualize communication dynamics using heatmaps/word clouds.
- Analyzed user activity patterns, sentiment, and response times.
- Tech Stack: Python, Matplotlib, Seaborn, NLTK.

Credit Card Fraud Detection using ML
- Developed a supervised machine learning model achieving 96.26% accuracy.
- Handled class imbalance using sampling techniques and performed feature engineering.
- Tech Stack: Python, Scikit-Learn, Pandas, NumPy, Matplotlib.

SMS Spam Classifier
- Designed a highly accurate NLP-based classifier to filter spam messages (94.23% accuracy).
- Deployed the model using cloud platforms for real-time accessibility.
- Tech Stack: Python, NLTK, Scikit-Learn, Heroku.

CERTIFICATIONS & ACHIEVEMENTS

Faculty Development Program on Generative AI   *Jan 2025*
Directorate of Technical Education & GCE Karad (1 Week)

NPTEL Elite: The Joy of Computing using Python   *Jul-Oct 2025*
IIT Madras | Score: 88% (Elite Silver)

NPTEL: Machine Learning & Deep Learning   *Jul-Oct 2025*
IIT Guwahati | Fundamentals and Applications

Intl. Conference Participant (ICCETAC-2025)   *Nov 2025*
GCE Karad | Cutting Edge Technologies in Advanced Computing