KUSHAAGRA VERMA

📞 +916264873679 ✉ kushaagrav10@gmail.com 🔗 /kushaagra-verma k /kushaagraverma

Education

Vellore Institute Of Technology   Oct 2022 – May 2027
Integrated M.Tech in Artificial Intelligence   *Bhopal, Madhya Pradesh*

Experience

InfoAxon Technologies India Pvt. Ltd.   Oct 2025 – Dec 2025
AI Intern   *Noida, Uttar Pradesh*

- Engineered a production-ready NLP pipeline transforming unstructured insurance data into a structured dataset, utilizing Python and BeautifulSoup to handle dynamic content and API rate limits.
- Fine-tuned a DistilBERT transformer model for text classification tasks using HuggingFace and PyTorch, optimizing hyperparameters to achieve 89% accuracy on validation sets.
- Deployed inference APIs for model consumption, reducing manual data processing time by automating the classification of insurance documents.

Projects

Forest Fire Prediction | *Python, Pandas, scikit-learn, XGBoost, Jupyter Notebook*   Nov 2025 – Dec 2025

- Built a model to predict burned area from meteorological and temporal features using the UCI Forest Fires dataset, achieving $R^2 = 0.80$ on held-out test data.
- Benchmarked XGBoost, Random Forest, LightGBM and Linear Regression; selected XGBoost after RandomizedSearchCV tuning, reducing test RMSE by 22% versus baseline.
- Engineered cyclic temporal features, rolling weather aggregates, and drought indices; applied log-transform to the skewed target, validated with time-aware CV, produced SHAP explanations, and exported model artifacts (joblib) with a reproducible notebook.

Anemia Detection via Medical Imaging | *Deep Learning, CNNs, TensorFlow, OpenCV*   Oct 2025 – Nov 2025

- Designed a Computer Vision system to detect anemia from conjunctiva images, achieving 94.8% accuracy and 0.96 F1-score through rigorous model evaluation.
- Implemented and benchmarked architectures including ResNet50, VGG16, and Custom CNNs, utilizing transfer learning to overcome data scarcity issues.
- Applied advanced image preprocessing (CLAHE, color normalization) with OpenCV to enhance feature extraction and model robustness.

Zomato Predictive Analytics & EDA | *Python, Pandas, Scikit-learn, XGBoost*   Aug 2025 – Sep 2025

- Performed extensive Exploratory Data Analysis (EDA) on a large-scale restaurant dataset, identifying key correlations between location, cuisine type, and customer ratings.
- Built predictive regression models using XGBoost and Linear Regression, achieving an R^2 score of 86.4% to forecast restaurant success metrics.
- Mitigated multicollinearity through Feature Selection and statistical analysis, optimizing model complexity for better interpretability.

Technical Skills

Languages: Python, SQL, Java, HTML/CSS
Machine Learning: TensorFlow, PyTorch, Scikit-learn, XGBoost, OpenCV, NLTK, HuggingFace Transformers
Data Engineering & Tools: Pandas, NumPy, Docker, Git/GitHub, VSCode, Google Colab, Streamlit
Concepts: Natural Language Processing (NLP), Computer Vision, Statistical Modeling, REST APIs

Leadership / Extracurricular

VIT Bhopal Tech Hackathon   March 2024
Backend Developer   *VIT Bhopal University*

- Architected backend REST APIs for an e-commerce prototype, ensuring efficient data retrieval and state management.
- Collaborated in an agile team environment to integrate frontend components with database logic under strict deadlines.