ABHISHEK KUMAR

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EDUCATION

Oriental Institute of Science and Technology **08/2020 – 06/2024**
B.Tech - ***CGPA - 8.17*** *Bhopal, India*

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, HTML, CSS, SQL
Frameworks & Libraries: TensorFlow, PyTorch, Scikit-learn, OpenCV, Pandas, NumPy, Flask, FastAPI, ReactJS, Tailwind CSS
Dev Tools & Technologies: Docker, Git, GitHub, VS Code, Postman, Eclipse, Jupyter Notebook, Gitlab
Databases: MongoDB, MySQL
Machine Learning: Supervised & Unsupervised Learning, CNN, NLP, Computer Vision, Feature Engineering, Model Deployment

EXPERIENCE

Azine Web Technologies **02/2025 – Present**
Machine Learning Trainee *Ahmedabad, India*

- Engineered end-to-end machine learning pipelines for large-scale unstructured data processing using Python, FastAPI, and NLP techniques.
- Streamlined entity risk profiling by automating web scraping, data parsing, and negative news classification, reducing manual effort by 80%.
- Integrated backend APIs with a React-based frontend, delivering real-time compliance dashboards for faster decision-making.

Phoenix Labs Global **08/2024 – 02/2025**
AI/ML Intern *Texas, US*

- Designed, developed, and deployed advanced machine learning models to optimize predictive analytics workflows, boosting accuracy by 25% and improving decision-making efficiency.
- Collaborated on data preprocessing and feature engineering for AI solutions, improving model training efficiency by 30%.

PROJECTS

Anti Money Laundering (AML) System | Python, FastAPI, React, BeautifulSoup, NLP, MongoDB

- Built a fully automated pipeline to monitor and classify risk-related news on high-profile entities from global watchlists (SAN, PEP, APC, WLT), improving early risk detection accuracy by 30%.
- Fine-tuned a DistilBERT model for sentiment analysis, achieving 92% precision in isolating negative news from scraped Brave/Bing sources.
- Trained a Support Vector Machine (SVM) classifier to categorize 56+ types of criminal activity (e.g., fraud, abuse, violent crime), streamlining compliance case tagging.
- Automated data ingestion from OpenSanctions every 23 hours using cron jobs, ensuring real-time updates of 10K+ risk profiles stored in MongoDB.
- Designed and deployed a responsive React frontend integrated with FastAPI backend to deliver searchable, entity-specific risk dashboards with real-time filters.

Multi-National ID Barcode Extraction System | YOLOv11, OpenCV, PDF417, Python, OCR

- Created a universal barcode reader for IDs from over 5 countries, extracting structured data from PDF417 barcodes in various formats.
- Applied OpenCV preprocessing and YOLOv11 fine-tuning to boost barcode detection accuracy by 40% across poor lighting and low-res images.
- Engineered a multi-step OCR and parsing pipeline using PDF417 decoding with fallback filters to improve reliability on damaged IDs.
- Extracted personal data fields (e.g., name, DOB, ID) with 95%+ precision using a hybrid deep learning and rule-based approach.