DEVANSH SHARMA
Course : **B.E.**, Electrical and Electronics Engineering, 2026
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Subjects / Electives	Object Oriented Programing , Operating Systems , Machine Learning , Data Structures and Algorithms , Database Management Systems
Technical Proficiency	Python, JavaScript , Git, Deep Learning , Unsupervised Learning , Computer Vision , Data Visualization , Neural Networks , Docker , Machine Learning , NLP, Scikit-Learn, TensorFlow, Pandas , Data Analytics , SQL

INTERNSHIPS

Data Scientist , ITC PSPD **Jul 2025 - Present**

- **Led traceability and EUDR compliance** for **500+ Cr export** operations, managing **18+ Lakh MT of material across 17,000+ farmers and 30,000+ hectares,** ensuring continuous **audit-readiness** and **sustainability compliance** throughout the supply chain.
- **Implemented a real-time traceability pipeline** integrating SAP, Optivision, along with Azure systems to automate **DDS generation,** eliminating **1.5 Cr+ in annual vendor cost,** while ensuring **end-to-end product lineage visibility** and confidence of foreign clients.
- **Engineered a cross-system security pipeline** by unifying various datasets from HRMS, SAP, and physical access logs to detect all **credential misuse** and insider-risk anomalies, improving **access governance accuracy by 80%+** across all critical applications.
- **Launched** and iterated an **interactive incident-triage platform,** initially built using Streamlit and later migrated to a scalable Flask microservice, cutting investigation time from **nearly 30 days to under 30 seconds** hence **saving over 100 analyst hours per cycle.**
- **Developed a real-time bark-detection CV pipeline** for continuous 4K conveyor imagery, segmenting 10 to 15 logs per frame using grayscale enhancement, Gaussian filtering, adaptive Otsu thresholding, and directional morphological enhancement, achieving greater than **85% segmentation accuracy** and **automating early quality checks to reduce processing of the low-yield raw material.**
- **Established a scalable zero-trust USB governance system** for the air-gapped factory environments by designing a secure, multi-component data pipeline with **AES-256-GCM**, **RSA-OAEP,** and **Ed25519** signature, enforcing **100% encrypted data handling,** audit-ready job tracking, and **zero unauthorized data egress,** additionally enabling secure backup of operational data to on-prem servers.
- **Led UAT** for the MyFibre platform on Azure, validating cross-system data flows and strengthening platform security **with basic VAPT.**

Data Science Intern – Alert and Incident Analytics (GenAI), Reliance Jio **May 2025 - Jun 2025**

- **Developed an alert-clustering service** using TF-IDF with DBSCAN /KMeans to **reduce alert noise by ~40%** and accelerate root-cause discovery across **continuous, high-volume monitoring workflows in production** while **ensuring almost zero downtime.**
- **Productized alert-clustering intelligence** by building a self-service tuning user interface with interactive dimensionality reduction, eliminating DS dependency and enabling ops teams to continuously refine the modeling decisions **for evolving alerts in production.**
- **Automated real-time EDA and quality-scoring pipelines to detect anomalies within seconds of ingestion,** improving monitoring responsiveness and **reducing manual intervention** across operational alert workflows.

PROJECTS

Data Query Intelligence Platform (RAG + NLQ) - GenAI, RAG, LangChain **Jun 2025 - Jul 2025**

- **Engineered a scalable RAG pipeline** with a Chroma vector database and optimized ingestion workflows, including parallel processing and smart file-change detection, enabling **fast and cost-efficient knowledge retrieval** from large document sets.
- **Developed a natural-language SQL agent** using LangChain that autonomously generates and validates SQL queries from user questions, ensuring **reliable insight extraction** from structured data without manual database interaction.
- **Architected a dual-mode analytics application** with a Streamlit interface that seamlessly switches between semantic search for documents and SQL-based data interrogation, improving **data accessibility and decision velocity** for non-technical users.

Emotion Based Music Recommendation System - Machine Learning, Deep Learning **Mar 2025 - May 2025**

- **Boosted FER-2013 model accuracy from 54% to 70.29%** through targeted augmentation, batch normalization, dropout, and systematic hyperparameter optimization, improving model **robustness for real-time user interactions and continuous feedback.**
- **Delivered real-time personalization** by mapping facial emotion to music preference using an integrated inference along with a **playlist recommendation pipeline,** demonstrating **intent-aware engagement modeling for user experiences.**
- **Executed 7+ structured experimentation cycles** using RAF-DB and AffectNet to reduce class bias and enhance generalization across diverse user expressions and lighting conditions, enabling **reliable deployment across varied environments.**