# GAURAV BHARDWAJ

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## Education

B. Tech. Computer Science with Data Science specialization — September 2021 - June 2025
*The Northcap University Gurugram, Haryana*

## Experience

**Data Analyst Intern** — July 2024 – September 2024

**MetalMan Auto**

- Leveraged data analysis and predictive modeling techniques to optimize inventory management processes, resulting in over 80% inventory accuracy.
- Provided actionable insights to system owners by forecasting inventory demands, enabling informed decisions on stocking levels and reducing instances of stockouts.
- Contributed to the improvement of inventory turnover rates by implementing data-driven recommendations, leading to a 15% decrease in excess inventory holding costs.

## Projects

**AI-Powered CCTV Surveillance System (Python, OpenCV, YOLOv8, Deep Learning)**

- Developed a lightweight real-time surveillance system that processes CCTV footage at ~20 FPS, detecting object tampering, fire/smoke (83% accuracy), crowding, and weapons (89% accuracy) using YOLOv8 and deep learning models.
- Integrated ROI-based alerting for custom zones, improving threat detection precision by 90% in monitored environments.
- Optimized for edge deployment on M1 MacBook Air with <6GB memory usage, enabling cost-efficient use in high-security areas like museums and parking lots.

**MailMind – Smart Email Assistant (Python, NLP, LLM-based pipeline)**

- Developed an intelligent email assistant that summarizes threads, detects user intent (e.g., tasks, scheduling), and suggests contextual replies.
- Engineered a modular NLP pipeline that parses structured and unstructured email content with 92% relevance accuracy (measured on summary evaluations).
- Designed for future integration with calendars and task managers to boost productivity in cluttered inboxes by 30%.

**Hate Speech Recognition and Classification (Python, KNIME, Random Forest)**

- Classified 25,000 tweets into hate speech, offensive, and neutral content using text preprocessing and multiple ML models.
- Achieved 88% accuracy using Random Forest; also built a parallel workflow in KNIME achieving 87% accuracy.

**Managing Credit Cards with PostgreSQL**

- Designed a secure credit card system with 8 normalized tables supporting 10,000+ hypothetical users and 100,000+ transactions.
- Implemented 2 stored procedures and 2 triggers to automate reward tracking and bonus handling, improving transaction processing speed by ~25%.
- Ensured compliance with PCI DSS guidelines for secure handling of sensitive financial data.

**GDP and Economic Indicators Analysis(Tableau)**

- Analyzed GDP, HDI, labor, and R&D indicators for 18 countries across 35 metrics using 1500+ rows of economic data.
- Created 10+ interactive dashboards including correlation heatmaps, waterfall charts, and sector comparisons.
- Extracted key insights (e.g., 0.82 correlation between R&D spend and patent growth) used to support policy recommendations and investment prioritization.

## Skills

- **Languages & Frameworks: P**ython, SQL, TensorFlow, Keras, PyTorch, Scikit-learn
- **ML & AI:** Supervised/Unsupervised Learning, Deep Learning, NLP, Computer Vision, Model Evaluation
- **Tools:** Tableau, KNIME, OpenCV, Git/GitHub, MySQL, VS Code, Excel
- **Core Competencies:** Predictive Modeling, Data Preprocessing, Feature Engineering, Statistical Analysis, Data Visualization, Database Management