

# Hardik Sood

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## WORK EXPERIENCE

### Apprentice, CCS Computer Private Limited

(Feb 2025 – Present)

- Supported enterprise software deployment and provided hands-on assistance with technical troubleshooting across internal systems.
- Fine-tuned a **7-billion parameter Hugging Face model** using the **LoRA PEFT** library for efficient, low-rank adaptation in resource-constrained environments.
- Developed video analytics pipelines using **OpenCV**, **GStreamer**, and **NVIDIA DeepStream SDK**, including **object detection**, **face recognition**, and **real-time tracking**.
- Trained and deployed custom **YOLO models** for object/person detection using both **Ultralytics YOLOv8** and **YOLOv5**, integrated with **DeepSORT** and **re-identification** techniques.
- Implemented **OCR pipelines** using **PaddleOCR** for multilingual text recognition from scanned documents and video frames.
- Developed a fully functional **Node.js backend API** with secure endpoints, JWT authentication, MySQL integration.
- Trained a **RoBERTa-based model** for NLP tasks, converted it to **ONNX**, optimized it using **TensorRT**, and deployed it on the **NVIDIA Triton Inference Server** to enable scalable, high-performance inference.
- Built a **handwritten text recognition system** using **NVIDIA NeMo**, integrating pre-trained encoder-decoder architectures and CTC-based transcription pipelines.
- Worked on **Retrieval-Augmented Generation (RAG)** workflows using **NVIDIA NeMo** and **FAISS** to build knowledge-grounded QA systems.
- Successfully managed and executed a full-scale project during the apprenticeship period, showcasing end-to-end ownership and technical implementation.
- Received a formal appreciation email from the company leadership for outstanding performance and contribution to the project.

### Intern, Vodafone Idea Foundation

(Oct – Nov 2024)

- Led a project to analyze data in agriculture and technology, generating insights that contributed to a 15% increase in efficiency for client processes.
- Conducted case studies using advanced analytics, including language models insights.

### Summer Intern, Code Alpha

(June – July 2024)

Developed and deployed predictive models, achieving a 92% accuracy rate in predictive tasks related to customer behaviors. Data Science Intern

### Data Science Intern, Cognifyz Technologies

(April– May 2024)

- Conducted restaurant data analysis, which shared to an 18% reduction in cost through optimized forecasting models and visualization.

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## PUBLICATION

“Effective Techniques in News Text Summarization: An Evaluation of Extractive, Abstractive, and Hybrid Approaches,” GRENZE International Journal of Engineering and Technology, Volume 11, Issue 1, pp. 4664–4689, 2025. Analyzed the performance and real-world applicability of various news summarization techniques using large-scale datasets. Assessed transformer-based models for their accuracy, linguistic coherence, and relevance in producing concise news summaries.

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## PROJECTS.

### Product Image Intelligence Platform

- Enhanced Designed and launched an AI-powered application that automatically analyzes product images to generate compelling titles, brand names, descriptions, and feature lists.
- Delivered a seamless user experience with rapid, accurate results, supporting e-commerce cataloging and inventory management.
- Tech used is LLM multi-model used as for recognition, text reorganization, search about the product, give

brief about the product and search on the google shopping by serpapi.

Medical Document OCR & Summarization

- Developed a solution to extract and summarize key information from medical documents and images, including support for multilingual data and numeral conversion.
- Improved efficiency and accuracy in patient record-keeping by generating concise, per-patient summaries.

Real-Time Vehicle Monitoring System

- Built an end-to-end vehicle detection and speed estimation pipeline for live video streams, including automated license plate recognition and real-time data logging.
- Enabled actionable insights for transportation analytics and fleet management through annotated video output and instant reporting.

Automated Security & Person Recognition

- Deployed a real-time system for detecting individuals in custom-defined areas, with instant image- based alerts sent to security teams.
- Enhanced safety and response times by integrating live video analysis with automated notification workflows.
- Also includes whatsapp alert message when comes to the sensitive area in the roi using green whatsapp API Key.

Agricultural Yield Prediction Tool

- Directed the development of a machine learning solution to predict crop yields from agricultural data, using efficient training and deployment strategies.
- Assisted data-driven decision-making for farmers and agribusinesses, improving yield forecasts and resource planning.

TECHNICAL SKILLS

- **Programming:** Python, R, SQL, C++, HTML, CSS
- **AI/ML Frameworks:** PyTorch, TensorFlow, Hugging Face Transformers, ONNX, Nvidia- TensorRT, PaddleOCR, Nvidia Triton, NVIDIA NIM and NeMo
- **Cloud Platforms:** AWS, Azure, Google Cloud (deployment, model hosting, data pipelines)
- **MLOps/DevOps:** Docker, NVIDIA-Triton Inference Server, Gradio, Flask
- **Data Management:** MySQL, MongoDB, Hive.
- **Visualization:** Power BI, Tableau, MS Excel.

EDUCATION

- **Chandigarh University**  
Master of Science (MSc) in Data Science | GPA:7.35 2023 – 2025
- **Maharaja Ganga Singh University**  
Bachelor of Computer Applications (BCA) | GPA: 7.1 2019 – 2022

CERTIFICATIONS

- Python Certification
- Develop generative AI apps in Azur (**Microsoft**)
- Java Basics Certification
- **Google** Data Analytics Professional Certificate
- Natural Language Processing on **Google Cloud**
- **Tata Data** Visualization: Empowering Business with Effective Insights (June 2024)
- **Accenture** North America Data Analytics and Visualization (July 2024)