

KHANDGONDA NITIN

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Education

Indian Institute of Information Technology and Management (IIITM) Jun 2021 – Jun 2026
Integrated M.Tech in Information Technology *Gwalior, Madhya Pradesh*

Experience

 **Research Intern** May 2025 – Jul 2025
Indian Institute of Information Technology and Management (IIITM) *Gwalior, MP*

- Architected a novel **hybrid deep learning model**, synergizing a **DenseNet201** backbone with a **Vision Transformer (ViT)** for multi class Brain Tumor Classification.
- Pioneered a **cross-attention fusion module** to intelligently fuse mid-level spatial details with end-level semantic features.
- Achieved **98-99%+ diagnostic accuracy** across a preprocessed and augmented dataset of **7,000+ MRI scans**, outperforming multiple crafted **neural network architectures**.
- optimizing models for **scalability** and **reproducibility**.

Projects

Driver Drowsiness Detection | *Python, TensorFlow, Keras, Streamlit, CNN* 2024
– Implemented a CNN-based eye-closure detection model on the **MRL Dataset(80k+ images)**.
– Enhanced **real-time** detection using Haar cascades and **transfer learning** with Inception V3.
– Deployed system with **Streamlit GUI**, enabling real-time driver safety alerts.

InsightDocs: AI-Powered PDF QA Assistant | *RAG, LLMs, VectorDB* 2025
– Developed an AI-powered document question-answering system using FastAPI, Streamlit, LangChain, and Groq LLMs (**RAG pipeline**) to extract and summarize insights from 20+ domain PDFs.
– Integrated **Pinecone VectorDB** with LangChain for high-speed semantic search and context retrieval, achieving **< 1 s query latency** and **95% context accuracy** across test queries.
– Deployed and optimized frontend and backend on **Render** with secure API key management, reducing overall runtime overhead by 50% and ensuring scalable real-time performance.

DOTLOGGER — Chat System | *TypeScript, Node.js, MongoDB, OpenAI, REST API, Docker* 2025
– Developed a **Scalable TypeScript-based backend system** for AI-powered chat interactions.
– Engineered secure **REST APIs** for chat and user management; containerized services using **Docker**.
– Implemented **MongoDB** database connectivity for secure data storage and integrated **OpenAI API** for AI-powered responses and intelligent logging analytics.

Technical Skills

Programming Languages: C/C++, Python, JavaScript (ES6+), SQL
Web/Backend: Node.js, Express.js, React.js, MongoDB, Django, REST API, Microservices
Machine Learning & AI: TensorFlow, Keras, OpenCV, NumPy, Pandas, RAG, LLMs, NLP
Developer Tools: Git, GitHub, Docker, VS Code, Jupyter Notebook, Linux, LaTeX

Achievements & Leadership

- Solved **150+ Data Structures & Algorithms problems** across LeetCode and HackerRank.
- **Event Head**, Aurora (Central India's Largest Fest)
- Coursera certifications in **Machine Learning, Deep Learning and neural networks**.
- **Director of Operations, Rotaract Club of IIITM:** Event organization and team collaboration.
- **Executive Member, Manchtantra**