

NITYA SHARMA

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EDUCATION

Bachelor of Engineering - Artificial Intelligence and Machine Learning

R V College of Engineering
(CGPA - 8.48)

Sep-2023 - Expected 2027
Bengaluru, India

SKILLS

Languages : C/C++, Python, C -sharp, JavaScript (basic), HTML (basic)
Technical Skills: LLM, NLP, Auto-encoders, Open-CV, MongoDB, Express.js, React.js, Node.js, MySQL, RAG
Tools: Unity, Blender (basic), Git, Docker, Postman, VS Code, Lapentor, AR/VR SDKs

PROJECTS

NyayAssist for Lawyer AI-assistant — LLM, Chroma Db, RAG, FAISS, Kanoon API

- Built a Generative AI legal assistant using GPT-4, LangChain, and ChromaDB to analyze criminal notices, extract key information, and assist lawyers with real-time insights.
- Integrated mapping of IPC-to-BNS, CrPC-to-BNSS, and IEA-to-BSA law along with Kanoon API to compare old and new criminal laws and retrieve relevant case precedents from the past 10 years.
- The streamlit interface was implemented with the RAG architecture, enabling lawyers to interact with legal data, perform case research, and reduce manual workload.

TeraHeal for Wellness — CNNs, RNNs, Autoencoders, Transformers, React

- Built an AI-driven platform using CNNs, RNNs, LSTMs, Transformers, Autoencoders, and GNNs to analyze genetic and lifestyle data for early prediction of hereditary health risks.
- Designed a personalized health recommendation system using epigenetic modeling and reinforcement learning to provide user-specific adaptive wellness plans.
- Developed a responsive, interactive interface with React and Streamlit, enabling real-time visualization of genetic reports and lifestyle optimization insights.

SwiftPass Guardian for HMV — Unity, Ray-casting, UI Toolkit

- Designed a safe overtaking simulation system for heavy vehicles in Unity using C and raycasting techniques to detect oncoming traffic and lateral obstructions in real time.
- Applied physics-based detection, collision prediction algorithms, and distance threshold logic to assess overtaking safety and restrict acceleration beyond a set limit when unsafe.
- Integrated a context-aware alert mechanism that dynamically triggers visual warnings and overrides driver input to prevent dangerous overtaking and minimize accident risks.

EXTRA-CURRICULAR ACTIVITIES

- Core member of RVCE's Eastern Dance Team; won 15+ dance fests at regional and interstate levels.
- Secured 1st place in *Business Marathon* at Exuberance 2025 and qualified for the Hult Prize Regionals
- Two-time District-Level Champion in Rhythmic Gymnastics.
- Actively contributed as a member of the NSS (National Service Scheme) team at RVCE.