Nishant Soni

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EDUCATION

DSPMU, Ranchi Ranchi, India
Bachelor of Science in Information Technology (CGPA: 8.6/10.0) *2021 – 2024*
- **Rank:** Department Rank 4 (University) | Top 3% of Class

SGMC, Ranchi Ranchi, India
Intermediate (PCM) – 77% (Department Rank 2 in PCM) *2021*

TECHNICAL SKILLS

Languages & Frameworks: Python, C++, SQL, Bash, HTML/CSS, JavaScript, PyTorch, NumPy, Pandas, FastAPI, PyQt5

AI/ML & GenAI: LLMs (OpenAI, Ollama), LangChain, RAG, Hugging Face, YOLOv8, OpenCV, MediaPipe, FAISS, NLP

Tools & Platforms: Docker, Git, Postman, Firebase, n8n Automation, Google Cloud (VPS), Linux, Arduino, FFmpeg

Databases: PostgreSQL, SQLite

KEY PROJECTS

Video2Reel (AI Video Segmentation) | *Python, OpenCV, MediaPipe, OpenAI API, FFmpeg* Aug 2025 – Sep 2025
- Developed an automated pipeline to process YouTube videos, identifying and extracting viral 60-300s segments.
- Integrated **GPT-4o-mini** for transcript analysis and semantic segmentation to identify high-engagement content.
- Implemented dynamic face-tracking/cropping using **MediaPipe** to convert horizontal video to vertical (Reels) format.
- Engineered a batch processing workflow using **FFmpeg** for precise timestamping and subtitle embedding.

Coffee Multi-Agent System (RAG & LLM) | *FastAPI, Streamlit, LangChain, Docker, Ollama* Mar 2025 – Apr 2025
- Architected an **offline-first Multi-Agent system** for e-commerce, featuring intent classification and order handling.
- Deployed local LLMs via **Ollama** and implemented **RAG** using FAISS vector stores for context-aware responses.
- Designed a microservices architecture using **Docker** to isolate the FastAPI backend, Streamlit frontend, and PostgreSQL DB.
- Implemented Apriori algorithm for personalized product recommendations based on chat history.

Tennis Analysis System (Computer Vision) | *YOLOv8, PyTorch, Custom CNN* Feb 2025 – Mar 2025
- Engineered a sports analytics tool using **YOLOv8** to detect and track players and tennis balls in real-time.
- Developed a custom CNN to map court keypoints, enabling calculation of player speed, shot speed, and distance covered.
- Utilized interpolation techniques to smooth trajectory data and overlaid analytics on output video using OpenCV.

IoT Smart Medicine Dispenser | *ESP-32, C++, MIT App Inventor, Google Cloud* Dec 2023 – Jan 2024
- Built an IoT-enabled device using ESP-32 to dispense precise medication dosages controlled via a mobile app.
- Integrated Google Sheets API for real-time data logging of dispensation events and historical tracking.

PROFESSIONAL EXPERIENCE

BrizTech Infosystems Pvt. Ltd. Remote
Machine Learning Intern *Jan 2024 – Feb 2024*
- Leveraged **Pandas, NumPy, and Matplotlib** to clean and visualize large datasets.
- Conducted comprehensive Exploratory Data Analysis (EDA) on the Haberman cancer survival dataset to identify key feature correlations.

FormalPsychology.com Remote
Technical Lead (Contract/Intern) *July 2023 – Oct 2023*
- Led the technical development of psychometric test kits using **ESP-32** hardware and Google Sheets API integration.

- Automated data workflows for patient management and developed a custom display interface for testing hardware.

Lifetech Software Solution   Remote

Web Development Intern   *Sep 2023 – Oct 2023*

- Developed "Whats2Web," a frontend clone of the WhatsApp UI using HTML, CSS, and JavaScript.
- Implemented regex-based parsing logic to convert exported chat logs into structured, readable HTML formats.

ACHIEVEMENTS & CERTIFICATIONS

Scholastic: Achieved **Department Rank 4** (University) in B.Sc. IT (2024); **Rank 2** in PCM (Intermediate College).
Certifications: Advanced Robotics Training (IoT & Embedded Systems); Machine Learning by Andrew Ng (Coursera).
Leadership: House Captain (10th Grade) - Led student council events; Tech Head at FormalPsychology.com.
Competitions: UDAAN I.T. Talent Search Selection (Govt. of I.T. & e-Gov); Gold Medal in Inter-school Math Quiz.