

Nishant Nirmal

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Profile

Motivated Computer Science Engineering student specializing in Data Science with strong interests in Generative AI, Machine Learning, and intelligent software systems. Experienced in building AI-powered applications using Python, TensorFlow, LangChain, and Streamlit, with hands-on experience creating deep learning and NLP solutions. Passionate about solving real-world problems through data-driven insights and scalable AI systems while continuously exploring emerging technologies in artificial intelligence and machine learning.

Education

Haldia Institute of Technology (HIT), West Bengal, India

B.Tech in Computer Science Engineering (Specialization: Data Science) — 2023 – 2027

Kendriya Vidyalaya, India

Higher Secondary Education (Class XII) – 83% — 2023

Jawahar Vidya Mandir, Shyamali, India

Secondary Education (Class X) – 94% — 2021

Projects

AI-Powered Library Management System — RAG, Vector Search, Full Stack

- Built a full-stack AI-enabled library platform with role-based dashboards and modules for catalog management, borrowing workflows, payments, and analytics.
- Integrated semantic book discovery using Gemini embeddings and vector similarity search, enabling natural language queries across library datasets.
- Architected a Retrieval-Augmented Generation (RAG) pipeline to power AI book recommendations and contextual search responses.
- Created AI reading roadmap generation and personalized recommendations using user behavior embeddings.

Raji AI Support Assistant — LLMs, RAG, FAISS Vector Search

- Built an AI-powered customer support assistant for the game "Raji: An Ancient Epic".
- Applied Retrieval-Augmented Generation using FAISS vector search and sentence-transformer embeddings for semantic knowledge retrieval.
- Constructed an automated ticketing system that classifies issues by category and priority while extracting device information.
- Engineered an AI Copilot module that detects similar historical issues using embedding similarity and generates solution suggestions.

Language Detection System — Deep Learning, NLP, TensorFlow, Streamlit

- Built a multilingual language classification system using an RNN model trained on labeled text data.
- Developed text preprocessing, tokenization, padding, and a confidence-based prediction pipeline.
- Deployed the model using Streamlit for real-time inference and visualization.

Technical Skills

Programming: Python, Java, SQL

Artificial Intelligence: Generative AI, Retrieval-Augmented Generation (RAG), Natural Language Processing, Deep Learning (ANN, RNN), Prompt Engineering

Frameworks & Libraries: LangChain, TensorFlow, FAISS, Pandas, NumPy

Databases: PostgreSQL (Supabase), Firebase Authentication

Web Development: React, Streamlit, Gradio

Tools: Git, GitHub, VS Code, Jupyter Notebook

Experience

In-house Campus Internship — Generative AI — 2025 – 2026

- Built a strong foundation in Python programming, prompt engineering, and Generative AI model workflows.
- Worked with real-world datasets to perform data preprocessing, exploratory analysis, and feature preparation.
- Applied machine learning algorithms to create practical AI-driven projects and prototypes.

Data Science Club of HIT (DSCH) — Technical and PR Member — 2026 – Present

- Participated in 5+ technical workshops covering data analytics, Python programming, and data visualization.
- Co-organized 3 technical events and knowledge-sharing sessions with 80+ student participants.
- Collaborated on mini analytics projects involving data preprocessing, visualization, and insight presentation.