

NISHANTH P OUSEPH

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OBJECTIVE

Third-year Information Science Engineering student specializing in **LLM application/backend development and cybersecurity**. Skilled in GenAI frameworks, backend systems, and AI/ML. Passionate about building **secure AI-driven applications** and exploring ethical hacking.

EDUCATION

Dayananda Sagar College of Engineering

Bachelor of Engineering - Information Science & Engineering

CGPA: 8.8/10.0

Bengaluru, India

2023 – 2027 (3rd Year)

TECHNICAL SKILLS

Programming Languages: C, C++, Python, JavaScript, TypeScript, Java

LLM/GenAI Tools: LangChain, LangFlow, LangGraph, MCP, Vector Database (ChromaDB)

AI/ML: TensorFlow, PyTorch, Scikit-Learn, Google Colab, Jupyter Notebook,

Web/Backend: FastAPI, Next.js, Express.js, Node.js

Frontend: React, Tailwind CSS, Streamlit

Databases: MongoDB, PostgreSQL, MySQL, MariaDB

Cybersecurity Tools: Nmap, Aircrack-ng, Airededdon, Wireshark, Network Analysis

Tools & Platforms: AWS, Git, Postman, Neovim, Shell Scripting

Operating Systems: Arch Linux, Ubuntu, Windows

PROJECTS

RAG-Bot with Long-Term Memory

[OpenAI](#) | [LangChain](#) | [LangGraph](#) | [FastAPI](#) | [Vector DB](#) | [Streamlit](#)

- Built Retrieval-Augmented Generation chatbot with persistent memory, dynamic knowledge updates, and document ingestion
- Designed backend with LangChain + FastAPI, integrated vector database for context storage, and developed Streamlit UI

MCP Server & Client

[FastMCP](#) | [NVIDIA AI API](#) | [Node](#) | [OpenWeather](#)

- Implemented custom MCP server using FastMCP and NVIDIA AI API for scalable AI tool orchestration (Weather-bot)
- Built lightweight terminal MCP client using Python's readline for seamless interaction

AI/ML Air Pollution Prediction System

[Python](#) | [Google Earth Engine](#) | [OpenWeather](#) | [ML](#) | [Next.js](#)

- Collected satellite + weather data dynamically to train pollution-level prediction models at any coordinates
- Developed FastAPI backend for model training, retraining, and inference endpoints with Next.js frontend UI

Serene Sphere – AI Mental Health Platform

[React](#) | [Express](#) | [MongoDB](#) | [Openrouter AI](#)

- Built mental health platform with AI therapist integration (chatbot) using Openrouter AI API, mood tracker, journaling, and secure user authentication

Book4All – Community Book Sharing Platform

[Next.js](#) | [MongoDB](#) | [NextAuth](#) | [Node.js](#)

- Created responsive platform for book sharing with secure auth, search/filter, and optimized DB operations

Mental Health DBMS

[Next.js](#) | [PostgreSQL](#)

- Architected secure DB for mental health data, optimized queries, and implemented CRUD with privacy compliance

Search Engine Results Page Clone

[Next.js](#) | [API Integration](#)

- Developed SERP clone with real-time search, API rate limiting, caching, and responsive UI