

NITIN KUMAR

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EDUCATION

Government Engineering College, Khagaria

B.Tech in Computer Science & Engineering (AI & ML Specialization)

Khagaria, Bihar

Expected 2028

Core Coursework: Design & Analysis of Algorithms, Machine Learning Internals, Linear Algebra, Probability & Statistics.

Government Polytechnic, Barh

Diploma in Artificial Intelligence & Machine Learning

Barh, Bihar

2022 - 2025

TECHNICAL SKILLS

Core Mathematics: Linear Algebra (Matrix Decomposition), Probability Distributions, Statistics, Calculus & Optimization

Machine Learning & Theory: Supervised/Unsupervised Learning, Sequential Models, Transformer Attention, Vector Similarity

Languages & Frameworks: Python, Java, SQL, PHP, C, TensorFlow, Scikit-learn, NumPy, Pandas

Tools & Databases: Git/GitHub, Linux, MySQL, MongoDB, Vector Databases, VS Code, Jupyter Notebook

EXPERIENCE

PearlThoughts

AI Engineer Intern

Remote

April 2025 – May 2025

- Architected statistical predictive analytics pipelines using Scikit-learn and TensorFlow, optimizing local data matrix preprocessing stages to scale convergence efficiency.
- Implemented automated feature engineering and dimensionality isolation techniques that minimized training variance.

PROJECTS

CrisisComms AI – Multi-Agent Coordination System

Kaggle Agents Intensive

- Designed a deterministic multi-agent state routing framework in Python to ingest and map real-time textual data streams.
- Engineered strict verification topology forcing independent evaluation nodes to run validation algorithms across conflicting data strings.
- **Tech Stack:** Python, Multi-Agent Frameworks, Algorithmic Graph Routing, Git.

MediGuide AI – Multimodal Optimization Pipeline

2026

- Developed an end-to-end numerical ingestion script that parses complex multimodal datasets for structured report extraction via Gemini API.
- Engineered token-tracking modules and exponential backoff wrappers to handle structural 429 rate limits dynamically under scale.
- **Tech Stack:** FastAPI, Next.js, Gemini API, Python, REST APIs.

NeuroPulse AI – Adaptive Recommendation Engine

Google Gemini API Competition

- Engineered an adaptive learning engine by transforming raw performance metrics into multi-dimensional vector matrices.
- Applied mathematical cosine similarity operations and distribution analysis to compute dynamic, scaling difficulty progression intervals.
- **Tech Stack:** Python, Vector Embeddings, Mathematical Similarity Scoring, NLP, Flask.

CERTIFICATIONS

- **NPTEL / SWAYAM:** Deep Learning for Natural Language Processing – Mastery of sequence architectures and attention mechanisms.
- **Google Cloud Specializations:** Attention Mechanism (ID: 15563771), Large Language Models (ID: 8305888), Image Generation (ID: 15426501).

ACHIEVEMENTS

- **ISRO Technical Assistant (Computer Science):** Successfully cleared the highly competitive national-level written technical examination.
- **Google Gemini API Competition:** Designed and successfully launched a functional vector-mapped application prototype.
- **Lateral Entry Academic Merit:** Earned direct B.Tech entry based entirely on top-tier engineering diploma ranking milestones.