

MITHILESH KUMAR

Dual Degree (B.Tech + M.Tech) in Computer Science and Engineering

☎ +916201383603 ✉ kumarmithilesh1729@gmail.com 🌐 Github 🌐 LinkedIn 🌐 Leetcode 🌐 Codeforces 📍 Patna

EDUCATION

National Institute of Technology, Patna

Dual Degree (B.Tech + M.Tech), Computer Science and Engineering

Nov 2022 - June 2027

CGPA : 9.01

Jawahar Navodaya Vidyalaya, Araria

Senior Secondary (Class XII)

2020 - 2022

Percentage : 93.6%

Jawahar Navodaya Vidyalaya, Araria

Secondary (Class X)

2019 - 2020

Percentage : 96.6%

AWARDS & ACHIEVEMENTS

- Achieved the **Knight badge** in LeetCode (Top 4%) and **Global Rank 826, 2027** in Weekly Contests 480, 486.
- Qualified among the top 800 teams out of 52,000+ teams nationally in the **Meta PyTorch OpenEnv Hackathon**.
- Advanced to the semifinals of **Google's national coding competition**, The Big Code.
- Qualified among the top 1,860 teams (Top 3.5%) out of 52,600+ nationally in **HackOn with Amazon - Season 5**.
- Selected for **Amazon ML Summer School 2026** among the top 3,000 of 134,000+ registered applicants.
- Selected as a **Dakshana Scholar** (Top 1% in India) and **Reliance Foundation Scholar** (Top 5,000 nationally).
- Received **CBSE Merit Certificate** (Top 0.1% in Math) and qualified for the **Regional Mathematical Olympiad**.

PROJECTS

Enterprise Complaint Resolution System | 🌐 Code

Jun 2026 - Jul 2026

Individual Project

- Architected a **containerized microservices-lite stack** using **Docker Compose** on **AWS EC2**, reducing deployment time by **approximately 80%** and ensuring environment consistency.
- Engineered an **asynchronous task queue** with **Celery** and **Redis** to offload SMTP operations, eliminating request blocking and reducing API latency to **under 50 ms**.
- Implemented **secure, stateless authentication** using **JWT**, developing a sub-millisecond **Redis Token Blocklist** to instantly invalidate compromised or logged-out sessions.
- Secured REST APIs against **DoS memory exhaustion** by enforcing strict **global pagination limits** and implemented **Role-Based Access Control (RBAC)** throttling.

Technologies Used : Django, DRF, PostgreSQL, Redis, Celery, Docker, Nginx, React

OpenSRE: Autonomous RL Agent Environment | 🌐 Live 🌐 Code

Mar 2026 - Apr 2026

Hackathon Project

- Engineered an **OpenEnv-compliant** AI simulation environment to evaluate and improve **LLM decision-making** on complex, real-world **SRE** debugging tasks.
- Developed a **dense RL reward system** and implemented **ReAct-based agents** to analyze dynamic system states and execute strictly validated **JSON** commands.
- Architected a scalable **FastAPI REST API**, deployed via **Docker** on Hugging Face, utilizing **UUID-based** session isolation for parallel model evaluation.

Technologies Used : Python, FastAPI, Docker, OpenAI API, LLMs

SKILLS

Languages : C/C++, Python, JavaScript, SQL

Coursework : Data Structures & Algorithms, Operating Systems, DBMS, Object-Oriented Programming, Computer Networks, Machine Learning, Deep Learning, NLP

Frameworks & Libraries : Django, Django REST, React, Vite, Celery, FastAPI

Databases & DevOps : MySQL, PostgreSQL, Redis, Docker, Nginx, AWS EC2, Git/GitHub, Postman

AI & Machine Learning : LLMs (Ollama, Gemini API), Prompt Engineering, ReAct Architectures