

AYUSH GUPTA

Software Engineer Intern | B.Tech Computer Science & Engineering | HBTU Kanpur
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PROFESSIONAL SUMMARY

Software Engineering student with strong foundation in Full-Stack Web Development, Backend Engineering, API Development, Microservices, Data Structures and Algorithms, and Object-Oriented Programming. Built scalable multi-agent systems using MERN stack (MongoDB, Express.js, React.js, Node.js), REST APIs, LangGraph, and RAG. Proven problem-solving ability with 700+ LeetCode problems and contest rating 1700+. Seeking Software Engineer Intern / SDE Intern roles to contribute to production software systems, debugging, and feature development.

EDUCATION

Harcourt Butler Technical University (HBTU), Kanpur — B.Tech in Computer Science and Engineering

Aug 2023 – May 2027 | CGPA: 7.7 / 10

Kanya Kubja Public School, Kanpur — Class XII (CBSE): 90% (2023) | Class X (CBSE): 93.4% (2021)

TECHNICAL SKILLS

Languages: C++, Python, JavaScript, SQL

Frontend: React.js, HTML5, CSS3, Tailwind CSS, JavaScript (ES6+)

Backend: Node.js, Express.js, REST APIs, Microservices, API Gateway, API Development

Databases: MongoDB, MySQL, Redis

Machine Learning / AI: TensorFlow, Scikit-learn, LangChain, LangGraph, OpenCV, NumPy, Pandas

Tools & Version Control: Git, GitHub, VS Code, Postman, Google Colab, Kaggle

Concepts: Data Structures and Algorithms (DSA), Object-Oriented Programming (OOP), RAG, Computer Networks

INTERNSHIP EXPERIENCE

AI/ML Software Engineering Intern — IBITF, IIT Bhilai (DST PRAYAS Program)

Deep Learning for Healthcare Diagnostics

- Developed deep learning diagnostic models for Pneumonia and Cancer detection using TensorFlow and VGG19 transfer learning, achieving 98%+ accuracy on medical imaging datasets.
- Designed and implemented complete end-to-end machine learning pipeline including data preprocessing, augmentation, class balancing, model training, evaluation (precision, recall, F1-score), and optimization.
- Collaborated on integrating trained AI models into mobile health diagnostic applications for real-world deployment and testing.

PROJECTS

NexusAI – Multi-Agent AI Platform | [GitHub](#)

Tech Stack: MERN (MongoDB, Express.js, React.js, Node.js), LangGraph, Microservices, RAG, OAuth, REST APIs

- Designed and developed a scalable multi-agent AI platform with independent Auth, Chat, Agent, and Billing microservices using API Gateway architecture for modular backend systems.
- Implemented Retrieval-Augmented Generation (RAG) pipelines with LangChain and vector embeddings for context-aware multi-step AI reasoning and API development.
- Built specialized AI agents for coding assistance, web search, PDF/PPT generation, image generation, and conversational AI.
- Implemented secure authentication using Google OAuth and Redis-based session management with proper debugging and testing.

Cod-r – Full-Stack Coding and Debugging Platform | [Live](#) | [GitHub](#)

Tech Stack: React.js, Node.js, Express.js, OCR, Gemini AI, REST APIs

- Developed a full-stack web application to streamline programming and debugging workflows.
- Integrated OCR and Gemini AI for automatic code extraction from images and built a Dry-Run Engine for step-by-step code execution visualization and debugging.
- Implemented live code preview, interactive console output, and code download/export functionality with real-time feedback.

Malaria Detection using Deep Learning | [GitHub](#)

Tech Stack: Python, TensorFlow, VGG19, OpenCV, Scikit-learn

- Built a medical diagnostic model using VGG19 transfer learning on Malaria Cell Images Dataset achieving 98%+ accuracy.
- Implemented complete ML pipeline: dataset cleaning, deduplication, augmentation, train-test split, training, and evaluation using confusion matrix, precision, recall, and F1-score.

CERTIFICATIONS

- Google 5-Day AI Certificate — Intensive Artificial Intelligence program by Google

ACHIEVEMENTS

- Solved 700+ Data Structures and Algorithms (DSA) problems on LeetCode | Contest Rating: 1700+
- CodeChef Rating: 1700+ (3-Star) | Codeforces Rating: 1400+
- JEE Mains 2024 – All India Rank 10,000 | JEE Advanced 2023 – AIR 15,000 | JEE Mains 2023 – AIR 18,000
- Runner-Up at Smart India Hackathon Internal Round (2025)