Ayan Kumar

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‹/› leetcode.com/u/Ayan-Kumar | 🌐 portfolio-ayan-kumar.vercel.app

Education

Punjabi University, Patiala   **Patiala, Punjab**

Bachelor of Technology in Computer Engineering   Jul 2024 – Jul 2028

Technical Skills

Core Strengths: Data Structures & Algorithms, Full-Stack Development, Machine Learning
Languages: Python, Java, C++, JavaScript, SQL, HTML/CSS
Frameworks & Libraries: React.js, Next.js, Node.js, Express.js, Tailwind CSS
AI/ML Tools: Google Gemini API, TensorFlow, Scikit-learn, Pandas, NumPy
Developer Tools: Git, GitHub, Vercel, VS Code, GitHub Copilot, Redis, WebSockets

Experience

AI/ML Intern — ShadowFox (Remote)   **Dec 2025 – Jan 2026**

- Designed and optimized end-to-end machine learning pipelines using Python and TensorFlow, improving model accuracy by 20% through hyperparameter tuning and architecture optimization.
- Built data preprocessing workflows handling 100K+ data points, reducing training time by 30%.
- Collaborated with cross-functional teams to deploy ML models with A/B testing and real-time performance monitoring.

Open Source Contributor — GitHub   **Nov 2025 – Present**

- Contributed merged pull requests across 5+ repositories involving bug fixes, feature enhancements, and documentation.
- Participated in code reviews and technical discussions with global developer communities.

Projects

Silent Guardian — Privacy-First Mental Health Support App
TypeScript, Next.js, Tailwind CSS, Google Gemini API
GitHub — Live Demo

- Built a privacy-focused web app using local-first architecture with browser Speech-to-Text, ensuring zero server-side audio storage.
- Integrated Google Gemini (Gemma models) for emotion detection and AI responses with fallback model routing, achieving 95%+ uptime and sub-2s response time.
- Achieved 90+ Lighthouse performance score and production deployment on Vercel.

Gitree — Python CLI Tool for LLM Context Generation
Python, CLI Development, PyPI, Git, File System Operations
GitHub — PyPI

- Contributed to open source Python CLI tool published on PyPI, implementing features for generating structured LLM context from codebases with multiple export formats.
- Enhanced file system traversal logic with gitignore pattern matching, depth controls, and binary file detection for efficient codebase processing.

- Optimized zip archive functionality and memory usage for handling large codebases with file size limits and gitignore rule compliance.

Achievements & Leadership

- Solved 200+ Data Structures & Algorithms problems across LeetCode and GeeksforGeeks.

- Active member of GDGoC Punjabi University, contributing to technical workshops and peer learning.

- Certifications: Elements of AI, GitHub Copilot Integration, EA Software Engineering Simulation, Gen AI Academy 2.0.

Hackathons & Competitions

- Participated in national-level hackathons building AI-driven student productivity and safety solutions.

- Solo developer participant in Google Solution Challenge.