Ayan Kumar

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EDUCATION

Punjabi University, Patiala   Patiala, Punjab
Bachelor of Technology in Computer Engineering   *July 2024 – July 2028*

TECHNICAL SKILLS

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

EXPERIENCE

AI/ML Intern   December 2025 – January 2026
ShadowFox   *Remote*

- Designed and optimized end-to-end machine learning pipelines using Python and TensorFlow, improving model accuracy and reliability by approximately 20% through hyperparameter tuning and architecture optimization
- Implemented data preprocessing workflows handling 100K+ data points, including feature extraction, normalization, and transformation pipelines that reduced training time by 30%
- Collaborated with cross-functional teams to evaluate and deploy ML models, conducting A/B testing and performance monitoring to ensure production readiness

Open Source Contributor   November 2025 – Present
GitHub   *Remote*

- Actively contribute to open-source projects, focusing on bug fixes, feature enhancements, and documentation improvements
- Collaborate with global developer communities to review pull requests and participate in technical discussions

PROJECTS

Silent Guardian - Mental Health Support App   TypeScript, Next.js, Tailwind CSS, Google Gemini
Github | Live

- Built a privacy-focused mental health web app using Next.js and TypeScript, implementing local-first architecture with browser Speech-to-Text API for voice input without server-side audio processing
- Integrated Google Gemini AI (Gemma 3 models) for emotion detection and supportive responses, with fallback model prioritization achieving 95%+ uptime and sub-2s response times
- Designed client-side data storage system allowing users full control over conversation history, with zero mandatory authentication or cloud storage requirements
- Deployed production application on Vercel with optimized build configuration, achieving 90+ Lighthouse performance score and supporting concurrent users

Real-Time Collaborative Tool   TypeScript, Next.js, WebSocket
Personal Project

- Developed a real-time collaborative platform using Next.js and WebSocket, supporting concurrent sessions for 50+ users
- Optimized database queries and implemented Redis caching, reducing latency by 60%

ACHIEVEMENTS & LEADERSHIP

Problem Solving: Solved 200+ Data Structures & Algorithms problems across Easy, Medium, and Hard difficulty on competitive programming platforms

GDGoC PUP Member: Active member contributing to technical workshops and community-driven learning initiatives (Oct 2025 - Nov 2025)

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