Souvik Ghosh

 github.com/souvikDeveloper | linkedin.com/in/souvikdev | gshsouvik01@gmail.com | +91-9903361461

EDUCATION

Indian Institute of Engineering Science and Technology, Shibpur July 2023 - May 2027
Bachelor of Technology in Computer Science and Technology GPA: 8.9/10.0

EXPERIENCE

IIEST Shibpur - Machine Learning Intern Feb 2025 - June 2025
  Howrah, India

- Developed an AI-powered virtual interview coach that improved candidate feedback speed by 60% through real-time analysis of speech and facial cues.
- Engineered dynamic question generation using Large Language Models, increasing question relevance and diversity by 40%.
- Integrated Whisper-based speech-to-text with noise reduction, achieving 90% + transcription accuracy in noisy environments.
- Optimized multi-modal emotion detection pipelines, reducing processing errors by 25% and enhancing user engagement insights.

PROJECTS

AI-Powered Code Review Assistant March 2025 - June 2025
Howrah , IIEST Shibpur git.io/lake

- Pioneered a full-stack, containerized platform using FastAPI, React, and Docker that delivers instant AI-driven code reviews, reducing manual review time by 70%.
- Fine-tuned the CodeT5 transformer with custom LoRA scripts, resulting in a 40% boost in code quality scores and actionable suggestions for Python code.
- Orchestrated Scrum-driven deployment cycles with end-to-end automated testing (pytest & GitHub Actions), ensuring continuous delivery of high-quality code review features.

Distributed LRU Cache April 2025 - May 2025
Howrah, IIEST Shibpur git.io/Cache

- Delivered a distributed Least Recently Used (LRU) cache system in Python, achieving sub-millisecond data retrieval latency and scaling horizontally across multiple nodes.
- Implemented concurrency control and eviction policies that improved cache hit rate by 35%, enhancing system throughput and reducing backend load.

Other Projects

- **Time-series database** : Built a scalable time-series database with optimized storage and low-latency queries.
- **SnakeRL: Optimal Strategy Agent** :Spearheaded an AI agent using reinforcement learning to master the Snake game with optimal strategies.

ACHIEVEMENTS

Team Lead, Google Solution Challenge 2025	Headed a team to rank 143rd out of 3,800 teams and 69,000+ global participants by developing a generative AI-based financial literacy app tailored for rural India, enhancing accessibility and education.	2025
SIH 2024 — College Winner, IIEST Shibpur	Secured first position among competing teams at the college level, demonstrating strong problem-solving skills and technical innovation.	2024
LeetCode Weekly Contest 442	Achieved Global Rank 970 among thousands of competitive programmers worldwide, demonstrating strong problem-solving and algorithmic skills.	2025
Winner, Hack IIEST Developer Hackathon	Won the Hack IIEST Developer Hackathon by delivering an innovative solution under tight deadlines.	2024

TECHNICAL SKILLS

Programming languages: C++, C, Python, SQL , JavaScript
ML/AI: PyTorch, NumPy, Pandas, Matplotlib, Transformers (LLMs), Whisper

Web Technologies: React, Streamlit, FastAPI, HTML, CSS
Data Engineering & Cloud: AWS (S3, Redshift), Delta Lake, dbt, Apache Kafka , MySQL, Docker

RELEVANT COURSEWORK

Computer Science: Deep Learning, Data Structures sond Algorithms, Databases , Operating Systems, Computer Networks.
Mathematics: Optimization, Discrete Maths, Probability and Random Processes, Number Theory, Linear Algebra.

POSITIONS OF RESPONSIBILITY

Core Team Member,GDG Cloud & Competitive Programming: 2024 - 2025
Actively contributed to organizing coding contests and technical workshops, boosting member participation by 30%.

Active Developer, Code IIEST: 2024 - Present
Constructed features and fixed bugs in open-source projects, enhancing functionality and collaboration.