

Sohini Banerjee

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SUMMARY

Motivated Computer Science Engineering undergraduate (GPA 8.59) with expertise in **Java**, **Python**, and **Full Stack Development**. Proven track record in architecting scalable microservices, deploying blockchain solutions, and building AI/ML models. Seeking a Software Development Internship to leverage skills in **Data Structures**, **Algorithms**, and **System Design**.

EDUCATION

- Vellore Institute of Technology (VIT)** Chennai, TN
B.Tech in Computer Science and Engineering (AI & ML) Jul. 2024 – Present
– **CGPA:** 8.73 / 10.0
– **Coursework:** Data Structures and Algorithms, Operating Systems, DBMS, Computer Networks, OOP.
- Delhi Public School** Kolkata, India
Senior Secondary (Class XII) - Science Mar. 2022 – Mar. 2024
– **Score:** 91.2%

EXPERIENCE

- Software Development Intern** Jun. 2024 – Aug. 2024
Hackfinity Chennai, India
– Developed and deployed responsive web interfaces using **React.js** and **JavaScript**, reducing page load time by **25%**.
– Collaborated with the backend team to integrate **RESTful APIs**, ensuring seamless data fetching for 1000+ daily users.
– Fixed critical bugs in the frontend codebase and documented technical specifications to support future development.

PROJECTS

- PRISM Protocol** | *Java, Python, Spring Boot, Blockchain, OpenCV* Oct. 2024
– Designed a decentralized identity system using **Spring Boot** microservices and **FastAPI** for deepfake detection.
– Implemented real-time liveness detection using **OpenCV**, preventing AI replay attacks with 99% accuracy.
– Deployed Smart Contracts on Polygon blockchain using **Solidity** to issue Soulbound Tokens (SBTs) for identity verification.
- Genesis - AI Code Synthesis** | *Python, Machine Learning, Matplotlib* Sep. 2024
– Built a Genetic Programming engine in **Python** that automatically generates code algorithms by evolving Abstract Syntax Trees.
– Optimized memory usage by 40% using Adaptive Mutation logic and visualized fitness trends using **Matplotlib**.
– Achieved 100% convergence on symbolic regression tasks, demonstrating advanced algorithmic problem-solving.
- Network Intrusion Detection System** | *Python, Scikit-Learn, Pandas* Aug. 2024
– Developed a security model using Random Forest and SVM classifiers to detect network attacks (DoS, Probe).
– Processed raw network traffic logs using **Pandas** and **SMOTE** for data balancing, achieving **99.2% accuracy**.
– Reduced false positive rates to under 0.5% by optimizing feature selection algorithms.

TECHNICAL SKILLS

Languages: Java, Python, C++, JavaScript, SQL, HTML/CSS, Solidity
Frameworks: React, Spring Boot, FastAPI, Node.js, Scikit-Learn, TensorFlow
Tools & Platforms: Git, GitHub, Docker, Linux, VS Code, MySQL, Postman
Core Concepts: Data Structures, Algorithms, DBMS, OOP, System Design, SDLC