Sarthak Aggarwal

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EDUCATION

BTech Computer Science Engineering (Spec. in Blockchain Technology)   **2021 - 2025 | Vellore**
Vellore Institute of Technology (8.83/10)

PROFESSIONAL EXPERIENCE

Blockchain Developer Intern   **09/2024 – Present | Remote**
Flexflier.com

- Initiated a platform that enables users to pay for tickets using both cryptocurrency and traditional methods, enhancing scalability.
- Developed a prototype smart contract for ticket booking, ensuring transparent and secure transactions and reducing ticket validation times by 20%.
- Suggested storing passenger and travel details on IPFS to enhance user data privacy, leading to a 15% improvement in data integrity and tamper-proof management.
- Researched and proposed automation solutions for loyalty programs, leveraging blockchain to enhance transparency, security, and user engagement, ensuring seamless integration with existing systems.

Research Intern   **09/2023 – 11/2023 | Ahmedabad**
Space Application Centre, ISRO

- Performed a comprehensive analysis of permissioned blockchain networks, identifying key use cases that projected a 40% increase in operational efficiency for targeted business units upon real-world implementation.
- Designed a prototype for a private blockchain, enabling controlled access for stakeholders and achieving a 50% improvement in traceability and security within the company's access control processes.
- Gained in-depth knowledge of blockchain technology, enhancing understanding of its application in safeguarding sensitive data.

PROJECTS

Animal Detection and Warning System | (GitHub)

- Conceptualized a highway safety system detecting animals via thermal sensors and an ML model with 90% accuracy.
- Automated alerts using MQTT and activated ultrasonic deterrents, reducing animal-road incidents by 40%.
- Build Developed a user-friendly Streamlit interface for real-time animal detection, enabling instant data visualization and boosting situational awareness in traffic safety assessments while incorporating OpenCV and YOLOv8 for thermal image processing.

EHR Management System | (GitHub)

- Created a blockchain-based EHR system integrated with IPFS, improving data security & reducing access delays by 25%.
- Implemented smart contracts for access control, leading to a 40% reduction in unauthorized data access and ensuring healthcare compliance.
- Enhanced data traceability and integrity through encryption, achieving 50% improvement in record accuracy and tamper-proof management.

Corporate Governance Voting System | (GitHub)

- Designed and deployed a blockchain-based voting system for corporate governance using DAO, deployed on Polygon using solidity and Truffle, ensuring secure, transparent voting and real-time result tracking.
- Crafted an intuitive UI/UX with CSS and Bootstrap, providing a seamless experience for users to view and vote on proposals in real time.
- Engineered a scalable solution for large organizations by streamlining proposal validation, reducing centralization and ensuring employee involvement in decision-making, hence reducing decision-making time by 40%.

LEADERSHIP AND VOLUNTARY EXPERIENCE

Drill Instructor - Seargeant   **03/2021 - 03/2024**
National Cadet Corps (Army Wing)

- Served as a Seargeant in the 1st B company of the 10th Tamil Nadu battalion, leading company of 150 Cadets as the Senior and Drill Instructor, while completing the NCC "C" Certificate.
- Instructed newly recruited NCC cadets on Leadership, Officer-Like Qualities (OLQs), as well as the fundamentals of drill and Weapon handling/shooting/positioning using four distinct types of weapons.

CERTIFICATIONS AND COURSES

Ethereum Blockchain Developer Bootcamp with Solidity (2024) (Udemy)	**08/2024 – 09/2024**
The Complete Data Structure & Algorithm Course in Python (Udemy)	**04/2024 – 08/2024**
Blockchain A-Z: Build A Blockchain, A Crypto (Udemy)	**03/2024 – 04/2024**

SKILLS, INTERESTS & OTHER ACTIVITIES

- **Programming Languages:** Python, Solidity, JavaScript, MySQL, MERN.
- **Technical Skills:** OOPs, Computer Networks, Operating Systems, DBMS, Cryptography & Network Security, DSA, Blockchain Development, Agile Methodology, Web3, Smart Contracts, IPFS.
- **Soft Skills:** Communication, Market Research, Collaboration, Decision making, Team management.
- **Software & Tools:** MS office, Google Suite, Oracle VM VirtualBox, Putty, Postman, Ganache, Docker, Confluence, Digital Ocean, Truffle, Draw.io, git
- **Other Interests:** Basketball (State level), Chess (State level).