Shannen Saikia

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Professional Summary

Passionate about problem-solving and mathematics with a keen interest in AI/ML and Web3 technologies. Focused on building innovative solutions at the intersection of machine learning and decentralized systems, from computer vision applications to blockchain-based platforms. Driven by the potential of emerging technologies to solve real-world challenges.

Education

Vellore Institute of Technology *2022 – 2026*
B.Tech in Computer Science Engineering, Specialization in Blockchain Technology

New Bombay City School, Navi Mumbai *2022*
CBSE Grade 12

Technical Skills

Languages: C, C++, Java, Python, JavaScript, TypeScript, Rust, Solidity, HTML/CSS, SQL
Technologies: Docker, AWS, Git/GitHub, Firebase, MongoDB, PostgreSQL, MetaMask, Hardhat, Ethers.js
Frameworks: React.js, Next.js, Express.js, Flask, FastAPI, TailwindCSS, Node.js
Machine Learning: TensorFlow, PyTorch, Scikit-learn, OpenCV, Pandas, NumPy, Computer Vision

Experience

Core Committee Member — RoboVITics Club, VIT *Vellore, India*
Machine Learning and Computer Vision Projects *Aug 2023 – Feb 2024*

- Contributed to robotics projects with a focus on Machine Learning and computer vision.
- Built jump counters and pose estimators using OpenCV and Python.
- Gained hands-on experience in ML concepts: classification, detection, and time-series analysis.

Projects

Assistive Vision System *Python, YOLOv8, Kotlin, ESP32, OpenCV*

- Developed AI navigation system combining YOLOv8 object detection (85% accuracy) with ESP32 haptic feedback hardware and Kotlin Android app for real-time obstacle detection and directional guidance.
- Optimized model for mobile inference; integrated camera processing, vibration patterns, and audio alerts for accessibility.

FinanceFlow – Personal Finance Analytics Engine *Python, Scikit-learn, Tesseract, React, Flask*

- Built full-stack system using OCR (Tesseract) and ML models to parse financial documents, categorize transactions, detect anomalies, and provide budgeting insights.
- Developed interactive React dashboard for visualizing spending patterns and savings forecasts.

Bitcoin Mining Simulator *Rust, SHA-256, Blockchain*

- Implemented proof-of-work blockchain simulator in Rust with SHA-256 double hashing, merkle tree construction, and configurable difficulty targeting.
- Built transaction handling system with UTXO model, wallet balance tracking, and chain validation; achieved accurate mining simulation with nonce iteration and dynamic difficulty adjustment.

eGov Portal – Blockchain-Based Governance Platform *React, TypeScript, Solidity, Hardhat, Ethers.js*

- Developed decentralized application with Solidity smart contracts for digital identity, certificate issuance, voting, and service requests; deployed on Ethereum using Hardhat with Ethers.js/MetaMask integration.
- Built responsive TypeScript/React frontend with TailwindCSS; achieved 93 passing test cases ensuring security and functionality.

Certifications

- **Oracle Cloud Infrastructure Generative AI Certified Professional** *2025*

  Expertise in LLM deployment, prompt engineering, RAG systems, and OCI AI services