Ayush Ranjan (He/Him)

 Portfolio   LinkedIn   GitHub   Twitter   Email   Medium

Education

Indian Institute of Technology (ISM), Dhanbad   2021 - 2025
Bachelor of Technology in Department of Mechanical Engineering (MME)
- **Relevant CSE Coursework:** Blockchain Technologies, Data structures and algorithms, Artificial Intelligence, Cryptography, Graph Algorithms, Computer Programming, Optimization Techniques, Evolutionary Computation.

Experience

Marlin Protocol   March 2025 – Present
Software Engineer (& Developer Relations)   Remote, Singapore
- Verifiable computing protocol featuring TEE & ZK-based coprocessors to delegate workloads over decentralized cloud

I'mBesideYou   May 2024 – July 2024
Software Engineer Intern | Certificate   Tokyo, Japan
- Optimized their product using CapacitorJS, fixing bugs and reducing API calls to increase response speed by 30%.
- Developed Capacitor plugin to shift the load from WebView to native environment, increasing system speed by 40%.
- Implemented CPU-optimized Microsoft's phi 3 model using ONNX Runtime for local AI inference.

Furverse   July 2023 – April 2024
Blockchain Developer | Certificate   Remote, India
- Implemented all the AI and Web3 Functionality using Ethereum Blockchain (EVM-based chains).
- Responsible for building their Frontend and Backend System using React, MongoDB, Firebase, Node.js.

Freelance Work

DevsGiant | Next.js, Wagmi, WalletConnect, Ethers.js, Solidity, USDT, Polygon, Ethereum, Chainlink VRF.
- Designed and built ETH smart contracts and integrated them with the Next.js frontend for a Web3 gaming product.

Projects

StarknetAVS | GitHub, Demo / Pitch Doc | **ETH India'24 Winner : Winner of Starkware top project at ETH India'24.**
- Fetches transactions on Starknet blockchain and flags it if doesn't follow compliance rules using trained AI models.
- Built with EigenLayer's AVS for verifying all AI results, and operators can earn from re-staking.

Private-Gnome | GitHub, Demo, Pitch Doc | **ETH Belgrade : 1st Prize in IExec's top TEE IApp.**
- Predicts health risks from DNA, powered by a custom-trained ML model running securely in IExec's TEE.

StarkPAI | GitHub, Demo, Pitch Doc | **Starknet Hacker House Winner : I presented this project at IBW'24 stage as winners.**
- A wallet on Starknet Blockchain built from scratch for better and smarter user experience.
- Free AI-powered Web3 actions based on user prompts, designed to be user-friendly for those new to blockchain.

Crypto-UPI | GitHub, Demo, Pitch Doc | **Starknet Winter Hackathon Winner : Best Project in DeFi Track.**
- It solves a crucial problem for foreign travelers in India who want to use the UPI payment system but don't have INR.
- A decentralized intent solver marketplace, where local solvers can fulfill payment intents and receive crypto tokens.

ZK-Science | GitHub, Demo, Pitch Doc | Zero-Knowledge, ZK Verify, EDU Chain, DeSci
- Prove legitimacy of your scientific survey/research volunteers without revealing their personal data.

In-Device Offline Generative AI | GitHub, Demo | React.js, Capacitor.js, Transformers.js, LLM/SLM, ONNX-Runtime, Android
- **Motivation:** To build MVP of an AI chatbot for confidential use cases, like military, medical industries, tech firms etc.
- Implemented Lamini-Flan, Flan-Alpaca, Apple-OpenELM, Bart models to work fully offline In-browser / Android App.
- Added multilingual support with multi-model architecture and an optional translation API design for faster inference.

Achievements

ETH India'24 Winner | ETH Belgrade'25 Winner | Starknet Hacker House Winner | Starknet Winter Hackathon Winner | Mode DeFi & AI Hackathon Winner | Uniswap Hook Incubator Member | Starknet Top Builder certificate | Leetcode, GFG | **Starknet Basecamp Top Graduates | Founding Member**: Blockchain Club of IIT ISM | **Kartavya NGO:** Mentor underprivileged Kids