

Prabal Patra

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EDUCATION

Birla Institute of Technology and Science, Pilani
Bachelor's in Computer Science CGPA: 9.38

Pilani, Rajasthan
Aug. 2024 – Sep. 2027

EXPERIENCE

Stable Channels (Summer of Bitcoin)

May 2026 – Aug. 2026

Software Engineering Intern

Remote

- Architected the **Lightning stability loop** rebalancing overcollateralized channels every 30s with deterministic state recovery.
- Shipped **iOS wallet features**: biometric auth, QR scanner, receive flow overhaul, settings tree, and full localization.
- Hardened **LDK-Node integration**: deterministic channel selection, retry persistence, and background NSE settlement.

Protocol Labs Developer Guild (PLDG)

Aug. 2025 – March. 2026

Blockchain Contributor

Remote

- Authored code reviews for **libp2p**, **Drand**, and randomness protocols in the Protocol Labs ecosystem.
- Improved randomness handling and interoperability in **libp2p** and **Drand**, reducing failure cases.
- Hardened distributed system reliability across **IPFS** and **Filecoin** ecosystems.

Sybernetics Artificial Intelligence

Jun. 2025 – Jan. 2026

SDE Intern

Remote

- Implemented **Runa compiler** language features improving execution flow and cutting redundant evaluations.
- Built pilot apps validating persistence and interaction models, surfacing edge cases fixed in core runtime.
- Refactored compiler components and runtime paths to improve stability and cut execution-time regressions.

PROJECTS

ZYURA: On-Chain Flight-Delay Insurance on Solana (GitHub) (Live)

Nov. 2025

- Built a parametric flight-delay insurance protocol on **Solana** with instant USDC payouts via **Switchboard oracles**.
- Implemented policy NFTs, risk-pool vaults, LP shares, and an **Anchor + Next.js** dashboard; validated claim flows on devnet.

SortVision: Sorting Algorithm Visualizer (GitHub) (Live)

Mar. 2024

- Reached **1,000+ weekly users** across **72+ countries** and earned **220+ GitHub stars**.
- Architected a real-time sorting visualizer using **Next.js** and **React**; deployed with **Docker** and **Vercel**.

SpotHole (GitHub)

Dec. 2024

- Built a mobile pothole-reporting app with image capture, GPS tagging, and dashboard-based status tracking.
- Integrated Cloudinary/AWS storage and automated Twitter alerts for location-aware hazard reporting.

TECHNICAL SKILLS

- **Languages**: C, C++, Rust, Go, Swift, TypeScript, Solidity, Java, SQL, JavaScript
- **Frameworks**: React, Next.js, Node.js, Express, Spring Boot, Anchor
- **Tooling**: Git, Docker, Linux (Bash/Zsh)
- **Databases**: PostgreSQL, MySQL, MongoDB, Redis
- **Blockchain**: EVM, Solana, Bitcoin, Lightning (LDK-Node), Smart Contracts, Oracles, Web3

HONORS & AWARDS

2nd Runner-Up + Best Web3 Project – RIFT '26 Hackathon

PW IOI · Feb. 2026

- Implemented a parametric insurance protocol on **Algorand** using **AlgoKit**, enabling automated on-chain claim execution.
- Designed event-driven claim execution demonstrating automated decentralized settlement pipelines.

2nd Runner-Up – Monad Blitz Bengaluru

Monad Foundation · Nov. 2025

- Built a flight-delay insurance protocol on **Monad** with NFT policies and oracle-based USDC payouts.
- Recognized for robust contract architecture, performance, and end-to-end reliability on Monad's VM.

Winner – Scaler AI Labs Hackathon

Scaler School of Technology, Nov. 2025

- Developed a high-fidelity environment clone designed for reinforcement learning experimentation and agent training.
- Modeled system interactions to enable realistic RL simulation and policy testing.

Runner-Up – Algo Trek

Petrichor'25, IIT Palakkad, Jan. 2025

- Achieved **2nd** place in Algo Trek, the flagship algorithmic challenge at Petrichor'25 – IIT Palakkad's techno-cultural fest.
- Recognized for advanced problem-solving, efficient algorithm design, and competitive programming proficiency.

Runner-Up – Rabble Track

Unfold 2024 Hackathon, Dec. 2024

- Secured Runner-Up in the Rabble Track at Unfold 2024, a nationwide Web3 hackathon.
- Delivered a multi-factor auth system for Rabble's multichain wallet with password + biometric layers.