Bishnu Prasad Sahu

Full Stack & Android Developer | **React, React Native, Next.js, Node.js, TypeScript**

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SUMMARY

Full-stack systems architect and mobile engineer (BCA 2026) with 2+ years of production experience. Architected 12+ production React Native Android APKs (3 on Google Play) and 25+ live platforms across Linux VPS clusters and Windows Server. Secured 9 formal US Copyright Office registrations for proprietary healthcare, enterprise, and telemetry architectures. Sole developer of agrochemical platform (50+ dealers) with automated Tally ERP sync, petrol pump automation suite (4 APKs + 3 panels), and restaurant POS. RIFT Hackathon winner (1st place) and Supabase open-source contributor. Seeking SDE-1 roles in full stack, backend, mobile or DevOps.

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, Python, Java, SQL, C++, Go, HTML5, CSS3
Frontend & Mobile: React, Next.js 15, React Native, Expo (EAS), Android, Turborepo, Tailwind CSS, TanStack Query, Zustand, Socket.IO Client, Vite
Backend & Systems: Node.js, Express, REST APIs, Microservices, JWT Auth, Zod, Redis, BullMQ, Socket.IO, Crow (C++), FastAPI, Flask
Databases: MongoDB (Replica Set), PostgreSQL 16, MySQL, Microsoft SQL Server, Redis Cache, Persistent JSON FileStore
DevOps & Infrastructure: Linux (Ubuntu VPS), Nginx Reverse Proxy, Docker, GitHub Actions (CI/CD), PM2, Microsoft IIS, Let's Encrypt SSL/TLS, DNS
Integrations & Hardware: Razorpay Escrow, Tally ERP (XML API), Thermal KOT Receipt Printers, Fuel Dispenser Telemetry, Push Notifications (FCM)
AI & Computer Vision: OpenCV, YOLOv8, Deep SORT, Sentinel Hub Satellite Telemetry, LLM APIs, Voice AI

EXPERIENCE

Full Stack & Android Developer, Vaniki Crop Science (Full-time, Remote) May 2026 – Present

- Sole developer of commercial agrochemical platform (50+ dealers, 100+ orders/mo): 6 React Native Android APKs (Customer App on Google Play, Vaniki Crop Partners dealer app, StaffTrack field GPS APK) and 3 React admin portals in a TypeScript Turborepo.
- Engineered **StaffTrack**: proprietary field workforce GPS telemetry APK with background location tracking, battery level telemetry, punch-in/out geofencing, and automated daily shift attendance.
- Designed high-throughput Node.js/Express REST API on MongoDB with JWT auth, Zod validation, rate limiting, Redis/BullMQ job queues, and Razorpay payment escrow.
- Automated accounting: Node.js agent synchronizes approved dealer orders into Tally ERP via its XML API with self-healing process restarts.
- Maintained GitHub Actions CI/CD to Ubuntu Linux VPS (PM2, Nginx, Let's Encrypt); release customer and dealer apps to Google Play via EAS Build.

Software Engineer & Systems Architect, Zexton / Centralized Medical Solutions / ONCorg (Part-time) Jun 2024 – Present

- Architected and built 17+ commercial production platforms across Linux VPS (Nginx, PM2, MongoDB, PostgreSQL 16) and Windows Server (IIS, MS SQL Server).
- Secured **9 US Copyright Office Registrations** for core proprietary architectures including ONCorg Healthcare (TX-9-102-488), POC Consults (TX-8-941-205), ChurchWebsite (TX-9-106-201), CollegeMobi (TX-9-109-504), Organic & Organic (TX-9-108-403), and Zexton Enterprise (TX-8-755-312).
- Built **ONCorg Healthcare Network** (Next.js 15, PostgreSQL 16, MongoDB): hospital operations and clinical oncology network handling clinical records and automated lab report pipelines.
- Delivered Drevo Wheels end-to-end as sole developer: Next.js booking engine, admin panel, Razorpay deposits, and 2 React Native Android APKs on Google Play.
- Modernized Optavise Insurance Services (comparing 35+ national US carriers), SCM Supply Chain, and Biomed Asset CMS.

Lead Systems Architect & Developer, Indraprastha Petroleum (Contract) 2026

- Engineered complete petrol pump automation software suite: **4 specialized Android mobile APKs** (Admin, Station Manager, Staff Nozzle Operator, Customer Loyalty) + **3 web dashboards** (Superadmin, Station Ops Telemetry, Auditing).
- Automated real-time nozzle fuel dispensing telemetry, underground tank dip level calculations in liters, shift day-end reconciliation, and B2B credit party ledgers.

Full Stack Engineer — Hospitality POS, Kea By The Pool & TheMark Hotel POS (Production) 2026

- Built production restaurant POS for Kea By The Pool: real-time table floorplan layout, kitchen order ticket (KOT) routing to thermal receipt printers, and live waiter ordering via WebSockets.
- Engineered TheMark Hotel POS: room reservation engine, guest check-in/out folios, minibar inventory tracking, and payment settlement.

Computer Vision Intern, CogniAble (Remote) Feb 2024 – May 2024

- Developed real-time human detection pipeline using YOLOv8 + Deep SORT on live camera feeds, maintaining 95%+ tracking accuracy through dense occlusion and cross-over overlap.

SELECTED PROJECTS

Money Muling Detector, Winner [1st Place] of RIFT Hackathon, Bangalore | C++20, React, TypeScript GitHub

- C++ REST microservice (Crow) detecting money muling and smurfing rings across financial transaction graphs at O(N log N) speed with a custom Red-Black Tree and decision tree; Cytoscape.js graph explorer UI.

Ember, Serverless platform on Firecracker microVMs | Go, Linux, KVM, Firecracker GitHub

- Function-as-a-Service runtime in Go running every function in an isolated microVM; warm snapshot restores cut cold starts 10x (264 ms to 25 ms, p50), and from 3.4 s to 26 ms for 1 GiB model weight workloads; live migration with 51 ms downtime.

FAMS, Silver [2nd Place] among 80+ teams at AVISHKAR 2025 | Python, OpenCV, Voice AI GitHub

- Real-time diagnostic assistant combining conversational voice recognition and live camera facial expression analysis with LLM diagnostic trees to adapt medical explanations based on patient distress.

SamarthyaBot, Autonomous multi-agent operating system on npm | Node.js, CLI, LLM APIs npm

- Autonomous, privacy-first multi-agent system with 34 built-in execution tools and persistent local memory; surpassed 4,500+ npm downloads in 12 months.

FarmView AI, Finalist at HackOmania 2025 | Python, FastAPI, YOLOv8, Sentinel Hub GitHub

- Precision crop health telemetry: FastAPI microservice computes NDVI vegetation indices from Sentinel Hub multispectral satellite imagery, with YOLOv8 disease recognition on edge devices.

OPEN SOURCE CONTRIBUTIONS

- **Supabase** (supabase-py #1395): Resolved critical storage URL initialization bug across sync and async Python clients, authoring 12+ integration tests covering all base-URL edge cases.
- **Twenty CRM** (twenty #19088): Implemented formula-based computed fields for numeric columns: NestJS calculation service with Jest tests and read-only UI bindings.

EDUCATION

Bachelor of Computer Applications (BCA), Rungta College of Science & Technology, Durg 2023 – 2026
Hemchand Yadav University | Aggregate 76.1% | Class XII (CGBSE): 65.0% | Class X (CGBSE): 95.7% (Distinction in all subjects)
Coursework: Data Structures & Algorithms, Object-Oriented Programming (Java), Database Management Systems, Operating Systems, Computer Networks

HONORS & RESEARCH

- **Winner [1st Place]**, RIFT Hackathon, Bangalore: Money Muling Detector (O(N log N) graph traversal engine).
- **Silver [2nd Place]**, AVISHKAR 2025, Bhilai: FAMS AI medical assistant (competed against 80+ engineering teams).
- **Peer-Reviewed Preprint on Zenodo (2026)**: *Kuya Cloud: A Rule-Based Data Analytics and Automated Visualization Platform*. doi:10.5281/zenodo.18803300
- **9 US Copyright Office Registrations**: Secured official copyright registrations for proprietary production software architectures.