Tanmay Das *Full-Stack & Distributed Systems Engineer*

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https://www.linkedin.com/in/tanmay-das-dev/ github.com/dosuniquedev-cloud

TECHNICAL SKILLS :

Languages: Python 3.12+, JavaScript (ES6+), TypeScript, PHP 8.x, SQL, HTML5/CSS3

Backend & Systems: FastAPI (AsyncIO), Sails.js v1 (Waterline ORM), Express.js, Laravel 10/11, RESTful APIs, WebSockets, APScheduler, Celery

Frontend & Mobile:: React.js, React Native (Expo), Next.js (App Router), Tailwind CSS, Framer Motion, GSAP, Redux Toolkit

Databases & Cache: PostgreSQL 16 (Neon Serverless, Row-Level Locking), Redis 7 (Pub/Sub & Soft-Locks), MongoDB (Geospatial 2dsphere), MySQL, Firebase/Firestore

Integrations & Security: Stripe Webhook Pipelines, WhatsApp Cloud API, Shopify Admin API, RBAC Multi-Tenancy, Idempotent APIs

Hardware & IoT Protocols:: ESC/POS Thermal Printing (Claim Fencing & Lease Tokens), RFID Scanner Hardware APIs, Web Serial API (Digital Scale Lock)

DevOps & Cloud:: Docker, Docker Compose, AWS, Vercel, Render, Caddy/Nginx, Restic (Encrypted Backups), Backblaze B2, Locust Load Testing

OS: Windows,Linux, Mac OS.

Autonomus Robotics using Arduino UNO IDE Platform & Electronics.

Quick Learner and Team Player

Like to take initiative to experiment and learning.

ACHIEVEMENTS:

Employee of the Month:
Awarded for exceptional dedication and successfully delivering the complex Jewellery ERP module under tight deadlines.

PROFESSIONAL SUMMARY :

Full-Stack & Distributed Systems Engineer with a proven track record architecting high-concurrency enterprise SaaS platforms, real-time IoT/hardware-integrated web systems, and mission-critical business applications. Currently engineering multi-branch commercial architectures and resilient backend systems at **ResCount**. Extensive production experience across **Python (FastAPI), Node.js (Sails.js/Express), PHP (Laravel), and React/React Native**. Specialized in designing fault-tolerant systems featuring Redis caching and soft-locking, distributed hardware bridges (LAN thermal printing, RFID, Web Serial API), and atomic multi-state governance engines.

PROFESSIONAL EXPERIENCE

Full Stack Engineer, *ResCount*
Aug, 2026 – Present

- **Full-Stack & Multi-Tenant Architecture:** Engineered multi-branch commercial web applications and SaaS suites using **React, Sails.js (Waterline ORM), Node.js, and PostgreSQL/MongoDB**, featuring atomic state machines and optimistic concurrency control.
- **Distributed Concurrency & Reliability:** Architected fail-safe systems incorporating **Redis pub/sub, TTL soft-locks, and immutable snapshot revision publishing**, ensuring zero duplicate operations and eliminating race conditions in distributed environments.
- **Hardware & IoT Infrastructure:** Designed a local LAN print-agent microservice (PrintAgentController) with high-entropy pairing tokens, durable network discovery, and outbound job polling with **claim fencing and lease tokens**, ensuring cloud-to-hardware thermal receipt printing reliability over unstable networks.
- **Payment & Communication Pipelines:** Built secure **Stripe webhook checkout pipelines**, automated multi-channel messaging infrastructure (**WhatsApp Cloud API**, transactional email systems), and dynamic template delivery engines.
- **Domain Logic & Governance Engines:** Implemented **8-stage governance state machines** with atomic database promotions, complex hierarchical food modifier engines with branch-level overrides, and **Google Places geospatial algorithms** for dynamic delivery radius calculation.
- **Cloud Deployment & Resiliency:** Managed end-to-end cloud server deployments, Docker environments, reverse proxies, and automated offsite backup routines.

Software Engineer, *Infomaticae*
Feb, 2026 – July, 2026 | Kolkata

- **Asynchronous Microservices:** Engineered scalable asynchronous REST APIs and backend services using **Python (FastAPI)**, handling high-concurrency requests across student, educator, and parent portals.
- **Cross-Platform Engineering:** Developed responsive web interfaces with **React** and high-performance cross-platform mobile apps with **React Native**, ensuring smooth multi-device synchronization and sub-100ms UI latency.
- **AI-Driven EdTech Features:** Built core application workflows for the EdTech ecosystem, including the **"Hello Teacher" AI companion** and real-time student progress tracking modules.
- **System Performance:** Optimized PostgreSQL database schemas, connection pools, and caching layers to guarantee platform stability during peak classroom hours.

Technical Leadership:
Recognized as the **Top Performing Developer** for consistently solving critical backend challenges and handling the company's most difficult projects.

Client Representation:
Selected by management to represent the company during **onsite client visits** (Andhra Pradesh & Bhagalpur) to lead ERP deployment and user training, demonstrating strong communication and technical skills.

CERTIFICATES

Full Stack Web Development (PHP & Laravel) Ejobindia | 12-Month Intensive Program — | Hands-on training in **PHP, Laravel, MySQL, JavaScript, React, and REST APIs** | Built full-stack applications with **CRUD operations, authentication, and API integration** | Worked with **Git/GitHub**, deployment workflows, and real-world project structures

EDUCATION

M.A. in English, *University of Kalyani*
2015

B.A. in English (Hons.), *Raj College*
2013

Science (Computer Science Stream),
H.S
2010

S.S.C, *J.N.Academy*
2008

HOBBIES :

Building Websites and Applications , Robotics (Arduino IDE), Football, PhotoGraphy

LANGUAGES KNOWN :

English, Bengali, Hindi

Web Developer (PHP/Laravel), *RPS Solution Pvt. Ltd*
June, 2024 – July, 2025 | Kolkata

- **Enterprise ERP Engineering:** Spearheaded full-stack development of the **RPS Jewel Pro** ERP using **Laravel** and **React.js**, delivering core modules for Inventory, Purchasing, and Counter POS.
- **Hardware Optimization (-40% Processing Time):** Built a custom **RFID scanner API** bridging physical handheld scanning guns directly to the web app, cutting manual inventory intake time by 40% and enabling instant counter POS checkouts.
- **Shopify Omnichannel Synchronization:** Built a bidirectional sync engine between the ERP database and **Shopify storefronts**, automating live inventory deductions, catalog updates, and variant tracking (metal purity, weight, gemstones).
- **Financial & Regulatory Compliance:** Implemented automated double-entry accounting engines generating **General Ledgers, automated P&L statements, and GST-compliant return filings**.
- **On-Site Client Leadership:** Handpicked by management to lead on-site enterprise client deployments and staff training across retail jewellery chains in Andhra Pradesh and Bhagalpur.

PROJECTS:

Multi-Clinic Doctor Appointment SaaS,
FastAPI, PostgreSQL (Neon), React, Redis, Locust, Docker

- Engineered an async multi-tenant clinical management suite with **FastAPI, SQLAlchemy 2.0 (asyncpg), and Alembic**, enforcing 5-tier RBAC (Super Admin, Clinic Admin, Doctor, Front Desk, Patient Portal).
- Implemented **APScheduler background workers** running automated daily batch medicine expiry audits at 00:05, database cleanup at 01:00, and pharmacy stock reconciliation at 02:00.
- Built a production **disaster-recovery SRE suite** incorporating Restic encrypted incremental backups, Backblaze B2 accounting, retention policies, and an automated restore-verifier CLI.
- Validated high-concurrency performance using **Locust load testing** with realistic multi-role traffic profiling (99% baseline reads / 1% high-compute writes).

Multimodal AI Medical Prescription Analyzer | Python, Flask, Google Gemini Flash, React

- Developed an AI-assisted healthcare tool processing handwritten medical prescriptions and lab PDFs using **Google Gemini 2.5 Flash multimodal vision** and PyPDF2.
- Extracted dosage schedules, drug interactions, and precautions, with automated translation into vernacular Bengali for patient accessibility.
- *Live Demo:* dos2.pythonanywhere.com

AI Quote Generator (React.js, Firebase, Google Gemini AI)

- Developed a multilingual content generation application integrating **Google Gemini API** to produce unique quotes across **15+ Indian languages** with English translations.
- Implemented **Firebase Firestore** for real-time data persistence, tracking visitor sessions, and storing generation history with **infinite scroll** pagination.
- Engineered a client-side image generation feature using **html2canvas**, allowing users to convert text quotes into downloadable social media cards.
- Built a secure, password-protected **Admin Dashboard** to monitor user activity, analyze trending topics, and view generation logs.
- Deployed as a responsive web app on **Vercel** and wrapped as a native Android application using **WebView** for the Google Play Store.

Link : **https://ai-quote-generator-lake.vercel.app/**

EXTRACURRICULAR ACTIVITIES:

Photography
- Organised few workshops and seminars

Soccer Player
- Hosted and Organised few big Tournament and Managed a club for few Years.

Live Football Automation Platform & WhatsApp Bot | FastAPI, Redis, APScheduler, Node.js, Docker
- Engineered a real-time football analytics engine polling sports APIs, caching live match events in Redis, and syncing state to Firebase Firestore.
- Built an autonomous **headless WhatsApp bot (whatsapp-web.js)** broadcasting real-time match events, line-ups, and tactical boards directly to subscriber groups.

Geo-Location REST API | Node.js, Express, MongoDB
- Developed a specialized backend service using **Node.js** and **Express.js** to handle geospatial data storage and management.
- Implemented **MongoDB Geospatial Indexing (2dsphere)** to engineer a "Near Me" feature, enabling efficient proximity searches and radius-based queries.
- Designed RESTful endpoints to securely **store (Post)**, **retrieve (Get)**, and **remove (Delete)** location coordinates using GeoJSON standards.

ByteQuest Fusion of Tech
Language of Implementation: Laravel (PHP), HTML5, CSS, Jquery, Database, Vercel
Operating System: Windows 11, Windows 10.

Travel and tour booking website serve as online platforms that facilitate the planning, booking, and management of travel-related arrangements such as Trip Packages,Bookings, Queries and activities.