

JAYDEEP BALDE

☎ +91-8788437458 ✉ jaydeepbalade15@gmail.com 🔗 [linkedin.com/in/jaydeep-balde](https://www.linkedin.com/in/jaydeep-balde) 🐙 github.com/JaideepBalde 🌐

EDUCATION

Bharatiya Vidya Bhavan's Sardar Patel Institute of Technology, Mumbai 2021 – 2025
Bachelor of Technology in Electronics and Telecommunication Engineering
Narayana E-Techno Junior College, Thane 2019 – 2021
12th Standard (HSC, Maharashtra State Board)

TECHNICAL SKILLS

Languages: Python, JavaScript (ES6+), Java, SQL, Bash, C, C++
Backend & APIs: Node.js, Express.js, RESTful API design, JWT authentication, validation, error handling
Databases: MongoDB, PostgreSQL (CRUD, schema design, indexing)
DevOps & Deployment: Docker, CI/CD (GitHub Actions / Jenkins), Linux, Git, Nginx, Cloud (AWS EC2, Render)
Frontend (Working Knowledge): HTML5, CSS3, React
Monitoring & Observability: Prometheus, Grafana (basic), structured logging, system metrics
Data Analytics & BI: Advanced Excel (Pivot Tables, formulas), Python (Pandas, NumPy) for EDA, descriptive statistics, Power BI (dashboards, data modeling), Tableau
Tools: GitHub, VS Code, Postman

INTERNSHIP

SP Jain Institute of Management & Research Jan 2025 – Jul 2025
Research Intern – Data Analysis & Systems Support Mumbai, India

- Processed and validated datasets from **200+ participants** using Python (Pandas, NumPy).
- Performed statistical analysis including **hypothesis testing (p-test, chi-square)** to validate data patterns.
- Stored and queried structured survey data using **MongoDB** to support analytical workflows.
- Implemented NLP preprocessing pipelines using **Hugging Face models** for text normalization and preparation.
- Conducted root cause analysis and contributed to **SDLC-aligned** technical documentation.
- Automated data cleaning and validation workflows using Python scripts, reducing manual review effort.

PROJECTS

- **ZenLedger – Ledger-Based Family Finance System** 2025
React, TypeScript, Node.js, Express, MongoDB, REST APIs, JWT, Docker
 - Designed a **ledger-driven financial system** where balances are **computed from immutable transaction history**, ensuring correctness and auditability.
 - Enforced **role-based financial invariants** (Parent/Child) with CREDIT-only provisioning, DEBIT-only spending, and non-negative balances at the service layer.
 - Implemented **idempotent transaction handling** using unique transaction IDs to prevent duplicate operations under retries.
 - Added **approval workflows, audit metadata, and CSV exports** to simulate real-world compliance and traceability.
- **PulseQ – Distributed Job Scheduling & Execution Engine** 2025
Java 17, Spring Boot, PostgreSQL, JPA, Docker
 - Built a **persistent job scheduler** with stateful execution (PENDING, RUNNING, FAILED, SUCCESS) to ensure reliability across crashes.
 - Implemented **concurrency-safe job claiming** using database locking to prevent duplicate execution across workers.
 - Added **retry mechanisms with exponential backoff** and dead-letter handling for failed jobs.
 - Validated fault tolerance by simulating worker failures and ensuring safe job recovery.
- **Sentinel – Event-Driven Notification Pipeline** 2025
Node.js, TypeScript, Express, MongoDB, Redis, Docker
 - Designed an **event ingestion and delivery pipeline** decoupling API requests from downstream notification processing.
 - Implemented **idempotent event ingestion** and **retry-safe background consumers** using Redis-backed queues.
 - Modeled explicit event lifecycle states to enable observability and failure diagnostics.
 - Tested system resilience by injecting failures and verifying at-least-once delivery guarantees.

More projects available at: github.com/JaideepBalde

ACHIEVEMENTS

- Ranked **Top 5 / 115+** participants in Barclays Cybershala CTF (system exploitation, security challenges).
- Finalist in inter-college cybersecurity challenge; built USB Rubber Ducky-based keystroke injection tool.
- Published peer-reviewed paper in **IJRASET**: “Speech-Controlled Powerlenses for Optical Wearables.”

CERTIFICATIONS

Barclays Cybershala — Fundamentals of Cybersecurity and Ethical Hacking 2024