

# JAYDEEP BALDE

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## 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  
12<sup>th</sup> 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 – FinTech Ledger & Family Finance System** 2025  
*React, TypeScript, Node.js, Express, MongoDB, REST APIs, JWT, Docker*
  - Designed a **ledger-based financial system** where balances are **derived from immutable transactions**, ensuring auditability and correctness.
  - Implemented **role-based financial controls** (Parent/Child) enforcing CREDIT-only provisioning, DEBIT-only spending, and non-negative balances at the service layer.
  - Built **idempotent transaction APIs** using unique transaction IDs to prevent duplicate credits or debits under retries.
  - Added **audit metadata, approval workflows, and CSV exports** to simulate real-world financial traceability and compliance needs.
  - Containerized and deployed the system using Docker with environment-based configuration and JWT authentication.
- **Sentinel – Event-Driven Notification Service** 2025  
*Node.js, TypeScript, Express, MongoDB, Redis, REST APIs, Docker*
  - Developed an **event-driven notification system** decoupling API ingestion from delivery for reliability and low latency.
  - Implemented **idempotent ingestion** and **retry-safe background processing** with bounded retries and backoff.
  - Defined explicit event lifecycle states to provide operational visibility and failure diagnostics.
  - Validated resilience by simulating real-world failure scenarios.
- **PlatformCore – Production-Ready Backend Platformization** 2025  
*Docker, Docker Compose, GitHub Actions, Linux, Cloud Deployment*
  - Standardized **containerization, deployment, and runtime configuration** across multiple backend services.
  - Automated build, test, and deployment workflows using **CI/CD pipelines** with GitHub Actions.
  - Improved production operability through health checks, graceful shutdown handling, and structured logging.
  - Documented deployment and operational practices for maintainability and onboarding.

More projects available at: [github.com/JaideepBalde](https://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