TANISH SANGHVI

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LinkedIn | GitHub | Portfolio

Professional Summary

Final-year Automation and Robotics Engineering student (Class of 2027) with hands-on experience building and deploying production full-stack web applications, REST APIs, database-backed systems, and automated data pipelines. Proficient in Python, TypeScript, React, Next.js, Flask, Node.js, and PostgreSQL, with engineering experience in role-based authentication, automated testing (Jest, Playwright, Pytest), and AI integration. National hackathon finalist and final-year major project team lead.

Education

Vivekanand Education Society's Institute of Technology (VESIT), Mumbai *Aug 2023 – May 2027 (Expected)*
B.E. in Automation and Robotics Engineering *CGPA: 7.43 / 10.0*
Relevant Coursework: Data Structures & Algorithms, Database Management Systems, Machine Learning, Generative AI

Technical Skills

Languages: Python, JavaScript (ES6+), TypeScript, C++, SQL, HTML5, CSS3
Frontend: React.js, Next.js, Tailwind CSS, Responsive Design, State Management
Backend & APIs: Node.js, Express.js, Flask, RESTful API Design, Pydantic, Microservices
Databases & Cloud: PostgreSQL, Supabase, MongoDB, Firebase Firestore, Vercel, Render
AI & Data: Gemini API Integration, NumPy, Echo State Networks (ESN), Data Pipelines
Testing & DevOps: Pytest, Jest, Playwright, Git, GitHub Actions (CI/CD), Postman, JWT Auth, RBAC

Projects

Job Hunter – Automated Job Discovery Platform *Aug 2026 – Present*
Python, Flask, PostgreSQL, Supabase, GitHub Actions Demo | GitHub

- Built a modular job-ingestion pipeline with configurable parsing adapters for 114 company career-page sources across 9 applicant tracking system platforms.
- Integrated PostgreSQL/Supabase data persistence, configurable job filters, and AI-assisted profile scoring to support automated job discovery and evaluation.
- Implemented error handling, exponential retry backoff, and automated tests covering data extraction, persistence integrity, and network-failure recovery.

Battery State Estimator – Final-Year Major Project *Jul 2026 – Present*
Python, Flask, MongoDB, NumPy, Data Processing, Visualization Demo | GitHub

- Developed a software-based battery simulation and telemetry pipeline generating voltage, current, and temperature dynamics across configurable drive cycles.
- Implemented Echo State Network-based SOC/SOH estimation and comparative analysis against Extended Kalman Filter, Coulomb Counting, and adaptive RLS methods.
- Integrated simulation outputs and results from 4 estimation methods with MongoDB and a Flask-based visualization dashboard for monitoring battery behavior.

Department Ledger Portal – Academic Records System *Nov 2025 – Mar 2026*
Next.js, React, Firebase Firestore, Jest, Playwright Demo | GitHub

- Developed an academic records platform with separate student, faculty, and administrator workflows for record compilation and portfolio management.
- Implemented role-based access control (RBAC), audit logging, and document autofill using parsed data for structured academic record management.
- Wrote 199 Jest unit tests and 27 Playwright end-to-end tests to validate application logic and multi-tier authentication workflows.

Edvanta – AI-Assisted Learning Platform *May 2025 – Sep 2025*
Python, Flask, React, MongoDB, Firebase, Pydantic Demo | GitHub

- Designed and deployed 33 modular REST endpoints supporting assessment workflows, automated roadmap generation, and personalized learning pathways.
- Integrated Gemini API to power contextual evaluation and dynamic technical assessment generation.
- Implemented Pydantic request validation, Firebase JWT authentication, protected-route middleware, and role-based authorization for controlled API access.

DineEase – Restaurant Ordering System *Jan 2025 – Mar 2025*
React, Node.js, Express.js, MongoDB Demo | GitHub

- Developed a full-stack restaurant ordering application with menu browsing, cart management, checkout, and administrator dashboards.
- Implemented role-protected administrator workflows and MongoDB-backed order processing with persistent application data.
- Wrote 35 automated tests covering order calculations, order-payload handling, and route protection.

Achievements & Leadership

- **Team Lead – B.E. Major Project** *Jul 2026 – Present*
  Led a 4-member team building a battery analytics platform, defining the system architecture, delegating core modules, and integrating simulation and visualization components into one deployed system.
- **Co-organizer – UniMerge 1.0** *Apr 2026*
  Coordinated technical operations, submission validation, and developer support for a national hackathon with 130+ participants.
- **National Finalist – Hack Celestial 2.0** *Sep 2025*
  Reached the national finals with Edvanta in an engineering hackathon competition involving 320+ participating teams.