

Harshwardhan Patil

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EXPERIENCE

Software Developer Intern

June 2026 – Present

Leal Software Solutions Pvt. Ltd. | Pune, Maharashtra

- Develop a production full-stack SaaS platform for HVAC heat-load calculation using **Angular 17** and **Django REST Framework**, replacing a manual spreadsheet workflow used by the firm's design engineers.
- Design and build **REST APIs** in **Python/Django** that execute multi-step psychrometric and heat-load computations with **Pandas** and **NumPy**, validating outputs against published ISHRAE reference cases.
- Implement **JWT-based authentication and role-based access control (RBAC)**, subscription billing, and automated **PDF report generation** for HLC, AHU, and ducting deliverables.
- Build responsive Angular interfaces with **Bootstrap**, **DataTables**, and **Chart.js**, including dynamic reactive forms, client-side and server-side validation, and real-time data visualisation.
- Implement **JWT-based authentication and role-based access control (RBAC)** across a multi-tenant SaaS model, enforcing plan-level permissions and secure session lifecycle.
- Build the **subscription billing** flow covering plan state transitions, renewal handling, and failed-payment recovery, alongside automated **PDF report generation** for HLC, AHU, and ducting deliverables.
- Write unit and integration tests for calculation endpoints and verify API contracts with **Postman**, reducing regression defects across releases.

PROJECTS

Aangan Hostels and PG | *Next.js, TypeScript, PostgreSQL, Prisma, Redis, Sentry*

2025 – 2026

- Shipped a live, mobile-first student housing marketplace for the Kolhapur market, with map-based property discovery backed by indexed PostgreSQL geo-queries and server-side filtering.
- Designed a normalised **PostgreSQL** schema with **Prisma ORM** covering listings, owners, gated lead capture, and verified reviews, enforcing referential integrity across a two-sided marketplace.
- Built an internal admin console with two-sided lead management, owner analytics, and CSV export, cutting manual lead-routing effort for operators.
- Hardened production with **Redis** sliding-window rate limiting, **Sentry** error monitoring, **PostHog** product analytics, and technical SEO, deployed via **Vercel** with **GitHub Actions** CI.

Aangan Properties | *Next.js, TypeScript, PostgreSQL, Prisma, Redis, Google Generative AI*

2025

- Engineered a residential buy and rent real-estate platform with saved searches, multi-parameter filtering, and affordability calculators, distinct from the PG marketplace in both data model and user journey.
- Integrated a **Google Generative AI** voice assistant for conversational property discovery, improving accessibility for low-literacy and mobile-first users.
- Implemented multi-provider **OAuth authentication**, **Redis** caching and rate limiting, and server-side rendering to reduce repeat-query latency on high-traffic filter routes.

AI-Powered Developer Portfolio | *JavaScript, Tailwind CSS, Node.js, Express.js*

2025

- Built a responsive full-stack portfolio with an LLM-backed chatbot that answers questions about projects, technical skills, and contact details from a structured knowledge base.
- Developed **REST APIs** in **Node.js/Express**, live GitHub repository integration, dynamic project rendering, and mobile-first responsive layouts.

TECHNICAL SKILLS

Programming Languages: Python, JavaScript, TypeScript, Java, SQL

Frontend: React, Angular, Next.js, HTML5, CSS3, Tailwind CSS, Bootstrap, Responsive Web Design

Backend: Node.js, Express.js, Django, Django REST Framework, REST APIs, Firebase

Databases: PostgreSQL, SQLite, Prisma ORM, Redis, Database Design, Query Optimization

Testing and Quality: Unit Testing, Integration Testing, Jest, Pytest, Postman, Debugging

DevOps and Cloud: Git, GitHub, GitHub Actions (CI/CD), Docker, Vercel, Linux

Tools and Monitoring: VS Code, Sentry, PostHog, GitHub Copilot, npm

Concepts: Data Structures and Algorithms, Object-Oriented Programming, Authentication and Authorization, API Design and Integration, MVC/MVT Architecture, Agile/Scrum, Software Development Life Cycle

EDUCATION

University of Mumbai

Mumbai, Maharashtra

B.Tech in Computer Engineering, Honours in Data Science | CGPA: 7.65/10

Aug. 2023 – May 2027 (Expected)