

VATSAL KANOJIYA

Python Backend Engineer · Django · Frappe/ERPNext
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SUMMARY

Python backend engineer with **2.8 years** shipping production business systems — ERP, billing, HR and payment integrations — on **Frappe/ERPNext** (Python, MariaDB, Redis/RQ). Own delivery from client **requirement workshops** through data modelling and APIs to release. Building on **Django, DRF, Celery and PostgreSQL**; work daily with **LLM coding agents** in a spec-and-review workflow.

SKILLS

Languages	Python, SQL, JavaScript
Frameworks	Django, Django REST Framework, Frappe / ERPNext v15
Backend	REST APIs, Celery, Redis / RQ background jobs, schedulers, transactions & row locking, query optimisation
Data	PostgreSQL (pgvector, full-text search), MySQL / MariaDB, schema design, indexing
Tooling	Django test framework / unittest, Git, GitHub Actions CI, Docker Compose, Gunicorn, Nginx, Linux, AWS (EC2, S3)
Integrations	Razorpay, WhatsApp Business API, FCM, Zoom, biometric devices, SMS / email gateways

EXPERIENCE

Software Engineer · 360 IT Hub Pvt. Ltd., Bengaluru Feb 2025 – Present
Own delivery across **5–6 concurrent client projects** on **Frappe/ERPNext v15**; coordinate a **4-person team** spanning backend, Vue web, Flutter mobile and documentation.

- Delivered a pan-India vending service provider's **ERP to production** module by module: CRM first, then **inventory, purchasing, supply, accounting and asset management**, with custom apps on top of the stock core.
- Built its **consumption-based billing** and inventory logic: multi-site contract models, minimum-order-quantity waterfalls, **GST invoicing** with state-wise tax splits, and stock depletion against recipe matrices with **idempotent** approve / cancel / re-approve transfers.
- Modelled a **service-contract platform** for HVAC operations around installed equipment, linking **AMC contracts**, scheduled visits, spare-part use, warranty claims and CRM follow-ups, with **technician dashboards** showing visit rosters against live van stock.
- Replaced hard-coded WhatsApp vendor calls with a **database-configurable notification router**: two incompatible vendor APIs behind one interface, **12 call sites** moved onto it, so switching providers became a settings change.
- Reverse-engineered** an undocumented legacy platform to specify its replacement, authoring the **BRD/FRD** with domain model, **API contracts** and a defect register separating confirmed faults from inferred risk.
- Built HR and attendance on stock **HRMS**: controller overrides, **document-event hooks**, a **nightly auto-attendance job** for shift and half-day rules, **geofenced mobile check-in**, a biometric webhook, and employee self-service dashboards replacing month-end HR correction cycles.
- Use **LLM coding agents (Claude Code)** daily under a **spec-first** process: acceptance criteria, verification scripts in rolled-back transactions and **review of every generated diff**, which caught bugs such as quantities above the top slab billing at zero.
- Hardened **Razorpay** flows for link expiry, partial settlement and status drift; introduced **automated tests** to an untested codebase; **Scrum Master** and Jira admin; conducted **50+ technical interviews**.

Associate Software Engineer · 360 IT Hub Pvt. Ltd., Bengaluru Dec 2023 – Jan 2025
Cut report generation from **~5 s to ~1 s** by replacing **N+1 query patterns** with **batched queries**; built executive and **payroll reports** reconciling check-ins, attendance, holidays, leave and mid-cycle salary revisions.

- Built a **timesheet-to-billing** system for an accounting firm that surfaced unbilled overtime against contracted scope.
- Built a **recurring-task engine** with auto-generation, reassignment tracking and multi-channel dispatch; automated recurring regulatory filings and **subscription billing**.
- Built an **OTP-authenticated** public portal delivering individualised **S3-hosted** result PDFs over WhatsApp and email, with **background jobs** handling bulk dispatch.

Graduate Apprentice Engineer, B2B Sales · Godrej & Boyce Mfg. Co. Ltd. (Interio), Raipur Jun 2017 – Jun 2018

PROJECTS

- Super Notes** · Django, DRF, PostgreSQL + pgvector, Celery, Redis, Vue 3 · github.com/Vatsal-Kanojiya/super_notes
Synced notes app that answers questions from your notes (RAG), with citations. Built with Claude Code agents; I reviewed every diff.
- Built **RAG on hybrid retrieval**: pgvector HNSW similarity and Postgres full-text search merged by **reciprocal rank fusion**, filtered to the owner in SQL, with a **recall@5 / MRR** evaluation command.
 - Implemented multi-device sync with **optimistic locking**: per-user revisions issued under a **select_for_update row lock** for delta sync; stale edits get a **409 conflict** with the server's copy.
 - Metered LLM features through one limits layer: **per-user quotas** under row locks, system-wide caps under **Postgres advisory locks**, and **Idempotency-Key** replay so a retry is never charged twice.

- Expense Tracker** · Django, DRF, Celery, Redis, PostgreSQL, Docker · github.com/Vatsal-Kanojiya/expense_management
- Modelled shared expenses and per-participant splits with **database-level constraints**; removed **N+1 queries** with **select_related / prefetch_related**, backed by tests that assert **query counts**.
 - Made settle-up safe under concurrent requests with transaction.atomic and **select_for_update**; queued Celery jobs via **transaction.on_commit**; Docker Compose and **GitHub Actions CI**.

EDUCATION

M.Tech, Thermal Engineering · RGPV, Bhopal (Trinity Institute of Technology & Research) 2020 – 2023 · CGPA 9.08
B.E., Mechanical Engineering · RGPV, Bhopal (Lakshmi Narain College of Technology) 2013 – 2017 · CGPA 8.27
Certifications Python Full Stack (Django + React), JSpiders, 2024 · Machine Learning, Stanford Online (Coursera), 2022