

Ozone Bhattarai

BACKEND ENGINEER, PYTHON / DJANGO

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SUMMARY

Backend engineer with **3+ years** on production Django and DRF systems: a gateway ingesting attendance from **100+ biometric terminals**, a schema-per-tenant platform serving **6 organizations**, and Celery pipelines rendering report cards at school scale. Own schema design, API contracts, testing, and deployment.

TECHNICAL SKILLS

Languages	Python, SQL, TypeScript, Bash
Backend	Django, Django REST Framework, Celery, Channels, WebSockets, GraphQL, REST APIs, OpenAPI, OAuth2, OIDC, Keycloak, JWT
Data	PostgreSQL, Redis, RabbitMQ, django-tenants, multi-tenancy, schema design, query optimization, S3 / MinIO
Infrastructure	Docker, Docker Compose, Gunicorn, Uvicorn, GitLab CI, GitHub Actions, Linux, Sentry
Testing	pytest, factory-boy, model-bakery, coverage, pre-commit, Ruff, mypy
Frontend	React, TypeScript, TanStack Query, Tailwind CSS, Vite

PROFESSIONAL EXPERIENCE

ING Tech

December 2023 to Present | Kathmandu, Nepal

Software Engineer, Backend

Tasq

Multi-tenant work tracking, 6 organizations

Django 5.2, DRF, django-tenants, Keycloak, Celery, GraphQL, PostgreSQL, Redis

- Rebuilt the platform as a **schema-per-tenant** Django service serving **6 organizations from one deployment**; tenants onboard through the admin with schemas provisioned automatically.
- Co-authored and published **django-keycloak-auth**, an internal PyPI package putting Keycloak OIDC behind a **Backend-for-Frontend** proxy so tokens never reach the browser.
- Enabled **OAuth2 social login across tenant frontends** by routing every provider through one registered callback with the tenant carried in a signed state.

ING Attendance and Device Gateway

100+ biometric terminals, 7 institutions

Django, DRF, ADMS PUSH protocol, pyzk, Celery, RabbitMQ, GitLab CI

- Built an **ADMS PUSH protocol gateway** ingesting punches from **100+ ZKTeco terminals**, merging live streams, scheduled polling, and push uploads into one deduplicated pipeline.
- Ended chronic device clock drift by making the server the single time authority, replacing GMT header inference with an explicit local time and offset on a **120 second resync**.
- Guaranteed **exactly-once capture** with a composite unique constraint on device, user, and timestamp, and automated fleet sync, log clearing, and health probes across **16 Celery tasks**.

Ingine

Client outsourcing platform, sole backend engineer

Django 6, DRF, PostgreSQL, Celery, Redis, S3, Docker

- Shipped the backend across **8 business domains** (leads, clients, contracts, talents, attendance, timesheets, meetings, tasks) as the **sole backend engineer**.
- Enforced a services and selectors layer to keep business rules out of views, covered by **303 tests across 47 modules**.
- Built a **dynamic form builder** with a typed field catalog and scoped access tokens, letting operations publish forms without a redeploy.

Smart Report Card Systems

NEB and A-Level, two institutions

Django, Celery, Channels, WeasyPrint, RabbitMQ, Google Gemini

- Engineered a **bulk PDF pipeline** rendering and packaging report cards concurrently with Celery groups and chords, streaming per-document progress over WebSockets.
- Bridged to the **Java team's attendance system** through a **RabbitMQ message broker**, keeping student records in sync without either service touching the other's database.
- Integrated **Google Gemini** to draft student remarks and performance summaries, cutting hours of manual writing per cycle.

Study Info Centre

Software Engineer

July 2023 to November 2023 | Kathmandu, Nepal

Delivered application processing, course matching, and student management modules end to end on an international student recruitment platform.

EDUCATION

University of Wolverhampton, BSc (Hons) Computer Science

February 2021 to May 2023 | Kathmandu, Nepal

First Class Honours, 81%, top 5% of cohort. AAA Scholarship all three years, awarded to the top 10% of students.