

ABHINAV TIWARI

Bangalore Karnataka

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Skills

- Django
- Python
- Leadership
- K8
- GCP
- AI/ML
- LLD/HLD
- Docker
- Data Structures
- AWS
- PostgreSQL
- CI/CD (Github, Jenkins)
- Apache Airflow
- Azure
- Management
- OpenMetadata
- HuggingFace
- Zoho CRM

Experience

Betterhalf.ai (YC'21)

August 2021 – Present

Bangalore, Karnataka

Tech Lead

July 2024 – Present

- **Team Leadership & Architecture:** Leading a 14-member cross-functional team; conducting **HLD/LLD design reviews**, enforcing coding/design standards, and mentoring engineers on distributed system patterns (CQRS, event-driven design, eventual consistency).
- **Data Discovery & Classification:** Built automated pipelines on **OpenMetadata + Presidio**, extended with custom HuggingFace recognizers (BERT-NER, StarPII) for domain-specific PII/secrets detection. Applied model quantization (INT8/INT4) to shrink footprint 60% (2GB → 800MB), enabling cost-efficient CPU-only inference at scale.
- **Payments Platform:** Architected a **multi-rail payment system** supporting dynamic installments, virtual accounts (ICICI, DBS), and UPI/VPA rails. Designed settlement workflows with **ACID guarantees**, idempotent transaction APIs, and automated reconciliation pipelines. Followed **HLD** for service decomposition and **LLD** for payment state machine + ledger consistency.
- **Workflow Automation:** Engineered a proposal-generation engine with **rule-based orchestration** and template-driven APIs, integrated with CRM workflows. Reduced turnaround time from 2 days → **instant** and increased lead-to-conversion by 2.5x, while ensuring extensibility for future business rules.

Senior Software Engineer

July 2023 – July 2024

- **Zoho CRM Integration:** Led a team to integrate Zoho CRM with core services via **event-driven APIs**, enabling bi-directional sync of customer data and automating workflows across sales, payments, and onboarding. Improved operational efficiency and reduced manual interventions by 60%.
- **Infrastructure Migration:** Executed full-scale migration from **GCP → Azure**, redesigning VPCs, inter-service authentication, and monitoring stack. Achieved **50% cost reduction** while maintaining high availability and secure cross-service communication.
- **System Ownership:** Took end-to-end ownership of two mission-critical pods, driving **HLD/LLD reviews**, implementing observability (Grafana + Graylog), and hardening failure recovery strategies to ensure 99.9% uptime.
- **Live Streaming:** Engineered a real-time live streaming pipeline with third-party SDK integration, using **scalable, reusable cloud functions** and message queues for async event handling. Reduced latency to under 300ms across sessions.
- **CI/CD Pipeline:** Automated Docker image builds and deployments via a **GitHub Actions + Celery pipeline**, implementing zero-downtime rollouts and cutting release times from hours to minutes.

Software Engineer

August 2021 – July 2023

- **Scalable Microservices:** Designed and deployed **Kubernetes-based microservices** for matchmaking and astrologer services using **FastAPI, DRF, and Docker**. Implemented API gateway routing, horizontal pod autoscaling, and caching layers, contributing to **25% revenue growth** and onboarding **5M+ users**.
- **Cloud Migration & Cost Optimization:** Executed a full infrastructure migration from **AWS → GCP**, redesigning compute, storage, and network topologies. Achieved **50% cost reduction** while improving throughput and reducing average API latency by 30%.
- **Database Modernization:** Upgraded **PostgreSQL** (v11 → v14) with partitioning and query plan tuning, and integrated **MongoDB** for flexible data models. Improved query performance by 40% and enabled hybrid workloads for structured + unstructured data.
- **Automation & CI/CD:** Implemented a **CI/CD pipeline** with **GitHub Actions**, adding automated unit tests, static analysis, and container security scans. Reduced deployment cycle time from weekly → daily while ensuring zero-downtime rollouts.

Cosx.ai

April 2024 – March 2025

Consultant Backend Developer

Bangalore, Karnataka

- **Django Boilerplate:** Architected a production-grade **Django/DRF boilerplate** with modular service separation, JWT authentication, RBAC, **Celery + Redis** for async task execution, and Dockerized deployment. Published as an open-source template (GitHub: drf-template), now used across multiple projects.
- **Workflow Orchestration:** Engineered and optimized **Apache Airflow** DAGs for high-throughput ETL workflows, reducing pipeline latency by 40%. Implemented retry policies, backfills, and parallel execution strategies to ensure fault-tolerant, horizontally scalable automation.
- **Sports Data Engineering:** Built high-frequency scraping + ingestion pipelines for **NBL, NBA, and NRL** live data with millisecond-level freshness. Standardized match IDs, scores, and betting odds into real-time **JSON APIs**, powering latency-sensitive dashboards and downstream ML-based betting insights.

Wheelseye

Feb 2021 – August 2021

Backend Developer Intern

Gurugram

- Built scalable microservices in **Spring Boot** (AWS, PostgreSQL) with 100% unit test coverage and load testing.

Education

The LNM Institute of Information Technology

Sep. 2017 – May 2021

Bachelor of Technology in Computer Science

Jaipur, Rajasthan