PAVAN KULKARNI

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SUMMARY

Backend engineer, 4+ years across Go and Python. The work I am best at is the unglamorous kind: finding why a service is slow, why a queue backs up, why a number came out wrong. Cut chatbot latency from 1.5s to under 1s, dropped payout errors by 98%, moved a single-region platform to active-active. Currently building solar forecasting pipelines that keep producing output when the satellite feeds go down.

WORK EXPERIENCE

Open Climate Fix, UK (Remote): Backend Development Engineer Jan 2026 – Present

- **Own the forecast blending service** end to end, from design to production across three country deployments, merging national and regional model outputs with weights shifting to healthy inputs so no forecast run is lost during satellite outages.
- **Integrate ML forecasting models** into production pipelines and build the national and regional blending strategies on top, moving per-country settings into config so the pipeline is not rewritten per model or country.
- **Built Hexatron, an internal admin panel in Go**, triggering Airflow DAGs and surfacing run logs, giving the team one place to run and monitor the forecasting pipelines.
- **Moved 8 forecasting applications onto the internal gRPC Data Platform**, cutting **data-saving costs 30%** by shortening Airflow DAG runtimes and giving the team one source of truth.
- **Tracked down generation data going missing on re-runs**: deduplication filtered on timestamp alone, so once the national location was saved, every regional GSP at that timestamp was silently dropped. Pinned the case with a regression test.
- **Chased down rate limiting that silently exempted every /v1 route** once deployed despite passing locally, and set explicit limits across all 16.
- **Built a Streamlit dashboard for the data science team**, surfacing model outputs and forecast comparisons in place of hand-run scripts.
- **Onboard and mentor junior engineers**, two here and three across previous roles, reviewing their code and scoping starter tasks to get them shipping independently.

Orange Health Labs, Bengaluru, India: Software Engineer Feb 2025 – Jan 2026

- **Cut payout errors by 98%** by splitting tangled earning and payout logic into independent Go services, behind a new Gin endpoint backed by an SQS worker with automatic retries on failed settlements.
- **Moved order search off RDS and onto Elasticsearch**, re-indexing the order data to cut **search query time by 96%** and take sustained read load off RDS.
- **Automated monthly partnership invoicing** with a Go scheduler and a "dry run" review email finance checked before anything went out, cutting **invoice errors 95%**.
- **Built a JWT-based RBAC layer for Partner Invoices**, scoping dashboard access by role so partners could not see each other's financial data.
- **Owned the Django Health API** behind customer-to-doctor mappings, report delivery from order management, and the post-order edit flow letting customers correct their own details after booking.

Kaleyra, Bengaluru, India: Software Engineer Professional Jul 2022 – Jan 2025

- **Cut chatbot latency 33%, from 1.5s to under 1s**, building the FastAPI service to handle thousands of requests per second with session state cached in Redis ElastiCache.
- **Re-engineered the chatbot into a multi-region active-active deployment**, a design I chose and owned, with cross-region replication and failover ending single-region downtime.
- **Designed a Python microservice** streaming conversation logs to MongoDB over RabbitMQ, moving writes off the request path to cut **request latency 20%**.

SKILLS

Go: Gin, GORM, goroutines and channels, worker pools, context

Python: FastAPI, Django, Flask, Celery, Streamlit, asyncio, pytest

Data & Messaging: SQL, PostgreSQL, MySQL, MongoDB, Elasticsearch, Redis, Kafka, RabbitMQ, AWS SQS, SNS, Airflow

Infrastructure & Observability: AWS (EC2, RDS, ElastiCache, SQS, SNS), Docker, Kubernetes, Terraform, Linux, CI/CD, New Relic, Graylog, SigNoz, Sentry, Apitally

Architecture: Distributed Systems, Microservices, System Design, REST APIs, Caching, Sharding, Failover, Integration Testing

EDUCATION

B.E., Computer Science and Engineering — New Horizon College of Engineering, Bengaluru Sept 2019 – July 2022