Vishvendra Reddy Bhoomidi

BACKEND SOFTWARE ENGINEER

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PROFESSIONAL SUMMARY

Python backend engineer building multi-tenant SaaS systems across FastAPI, PostgreSQL, and Redis, with depth in authentication, transactional workflows, asynchronous job processing, and AWS deployment.

PROFESSIONAL EXPERIENCE

Kaarya AI
Founder & Lead Engineer | August 2025 – Present

- Built a commercial Python/FastAPI backend for multi-tenant CRM, messaging, and billing, with Pydantic validation, SQLAlchemy data access, and Alembic migrations.
- Implemented atomic Redis refresh-token rotation, replay detection, and family revocation; added race-condition regressions for refreshes that overlap logout or token reuse.
- Applied tenant and membership context to PostgreSQL transactions, enforcing row-level security and role-based access control across application data boundaries.
- Implemented optimistic concurrency control, idempotency keys, and transactional outbox events for workflow commands, rejecting stale updates and preserving auditable execution receipts.
- Built PostgreSQL-backed calendar job processing with SKIP LOCKED claims, persisted attempts, and exponential retries, removing scheduled notification work from API request paths.
- Built HMAC-verified webhooks and database-backed event deduplication, with replay-aware processing states and recovery paths for failed provider/payment events.
- Delivered Dockerized API and worker services on AWS ECS/Fargate with CI checks, readiness probes, Sentry monitoring, and retained source/artifact identities for rollback.

Propvia
Team Lead, Software Development Engineer Intern | April 2025 – September 2025

- Built Python-supported analytics integrations and React/TypeScript dashboard components for property and community data exploration.

V&U Intellect Consultants Pvt. Ltd.
Director | May 2023 - December 2024

- Developed AI microservices on AWS Lambda and EC2, connecting application workflows to cloud-hosted inference services.
- Profiled TensorFlow inference routines to identify execution and memory bottlenecks and guide performance optimization.

TECHNICAL SKILLS

Languages & APIs: Python, SQL, Bash, FastAPI, Pydantic, REST APIs
Data & migrations: PostgreSQL, Redis, SQLAlchemy, Alembic
Security: JWT, OAuth 2.0, RBAC, Row-Level Security (RLS)
Async & reliability: AsyncIO, Job Queues, Idempotency, Retries, Transactional Outbox
Cloud & CI/CD: AWS ECS/Fargate, Docker, GitHub Actions, Pytest, Sentry

EDUCATION

University of Michigan–Dearborn | December 2025
M.S. in Artificial Intelligence, Machine Learning Concentration
GPA: 3.82/4.00 | High Distinction | Graduate Tuition Scholarship

The Pennsylvania State University | May 2024
B.S. in Computer Science | Dean's List, 3 semesters