

Rishi Prakash

Senior Python Backend Engineer · AI / LLM Specialist

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SUMMARY

Python backend engineer with 6+ years across software and data science. Currently lead backend engineer on an enterprise AI coaching platform — building real-time streaming, voice AI, and retrieval-augmented systems in FastAPI that serve thousands of users at 99.9% uptime. Strong focus on performance, reliability, security, and measurable outcomes.

EXPERIENCE

Senior Python Backend Engineer, Degreed 2024 — Present

- Architected real-time AI conversations with FastAPI + Server-Sent Events at sub-100ms P95 latency.
- Built voice-coaching on WebRTC and the OpenAI Realtime API with connection and quality monitoring.
- Designed a retrieval-augmented (vector search) knowledge base for domain-specific responses.
- Hardened the platform with multi-layer prompt-injection defense and structured error handling.
- Led a zero-downtime model migration with dual-model fallback; cut Redis operations ~80%.

Data Scientist / Senior Data Analyst, LatentView Analytics Earlier

- Built predictive models and ML pipelines for Fortune 500 client problems.
- Designed executive Tableau and Qlik Sense dashboards; ran NLP topic modeling (LDA) on feedback corpora.

Data Science & Analytics Roles, Multiple organizations 2018 — 2022

- Developed ETL pipelines and BI reporting; performed statistical analysis and predictive modeling.

SKILLS

Languages	Python 3.11+, SQL, C#/.NET (integration)
Backend	FastAPI, asyncio, Pydantic v2, httpx, REST APIs
AI / LLM	Azure OpenAI, OpenAI Realtime API, RAG, function calling, prompt-injection defense
Real-time	Server-Sent Events, WebRTC, LiveKit, async generators, voice AI
Data & Storage	Redis (vector store, caching), PostgreSQL, MySQL, pandas, NumPy
DevOps	Docker, Kubernetes, Azure, DataDog, Prometheus, pytest

EDUCATION

Business Analytics & Data Science, SSN School of Advanced Career Education (with IBM) 2018 — 2019

Business statistics, BI & visualization, optimization, big data (Hadoop, Spark), predictive analytics. GPA 8.4/10.