

Parthiv Gupta

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PROFESSIONAL SUMMARY

Software Engineer with 1+ years of experience building scalable Python backend systems and machine learning applications. Experienced with FastAPI, TensorFlow, Scikit-learn, Speech AI, Computer Vision, Redis, PostgreSQL, Docker, and event-driven architectures.

WORK EXPERIENCE

Software Development Engineer, *Octinix Software Labs* 11/2025 – Present | Prayagraj
IP Geolocation Lookup Service – Linkio FiberNet (Backend Team Project)

- Built a FastAPI microservice for real-time IP geolocation lookup, supporting both IPv4 and IPv6 addresses.
- Implemented multi-layer lookup pipelines leveraging Redis, SQLite, DB-IP, GeoLite2, and RIPE Stat APIs for high-availability geolocation resolution.
- Developed cache-first architecture with Redis (24-hour TTL) to significantly reduce lookup latency and backend load.
- Created structured REST API responses using Pydantic models, ensuring type safety and consistent schema validation.
- Designed fallback and enrichment workflows providing location, ASN, timezone, postal code, and network metadata.
- Improved backend performance through optimized IP-range indexing, memory-resident MMDB readers, and efficient error-handling strategies.

Software Engineer Trainee, *Octinix Software Labs* 04/2025 – 11/2025 | Prayagraj

- Developed RESTful APIs, designed database schemas, and optimized Python application performance.
- Improved system throughput by 25% through service-level performance tuning and query optimization.
- Completed internal training in Python, Django, Flask, and Agile; promoted within six months for outstanding performance.

EDUCATION

Bachelor of Technology, Computer Science and Engineering 11/2022 – 07/2026 | Greater Noida
Galgotias University

ACHIEVEMENTS

UGC-NET (Computer Science & Applications) — Qualified, 2026 08/2026
University Grants Commission (UGC) | Conducted by National Testing Agency (NTA)

TECHNICAL SKILLS

Languages

Python, JavaScript, SQL

Machine Learning

Scikit-learn, TensorFlow, Keras, CNN, Transfer Learning, MobileNetV2, Computer Vision, Speech Recognition, Audio Processing, Vosk, librosa

Backend & APIs

FastAPI, Django, Flask, REST APIs, WebSockets, JWT, Pydantic

Databases

PostgreSQL, MySQL, SQLite, Redis

PROJECT

Voicemail AI / Answering Machine Detection Platform

- Built an event-driven early-call detection platform that processes up to the first 6 seconds of call audio and classifies calls as HUMAN or VOICEMAIL/IVR.
- Designed independent ASR, audio-feature extraction, aggregation, and ML inference workers using Redis consumer groups, enabling horizontal scaling of processing stages.
- Engineered a 550-feature classification pipeline combining 50 acoustic features with 500 transcript vocabulary features; achieved 96.31% accuracy and 92.87% F1 on a held-out dataset split.
- Implemented Vosk ASR, librosa audio analysis, PostgreSQL persistence, FastAPI APIs, authentication, rate limiting, and a React dashboard for predictions and call analysis.