NIRANJAN KRISHNA

Python Backend Engineer | 5+ Years Scalable Backend Systems and Architecture | 99.8% Uptime
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EXPERIENCE

Application Engineer, Formant **Nov 2022 — Apr 2025**

- Led development of the core fleet management portal, contributing to 20–30% of Formant's total revenue, with 99.8% uptime for managing 20,000+ production robots.
- Engineered and documented core libraries and pipelines (Python, Go, gRPC, ROS2) for real-time robot control and communication, enhancing CSAT to >92%.
- Built fault-tolerant data ingestion pipelines, processing 500,000+ records per month and reducing ingestion times from 15 minutes to sub-second latency.
- Developed performance analytics tools using Snowflake and Python, processing 1M+ data points in real time with minimal latency for actionable operational insights.

AI Engineer, Reknow.ai **Nov 2021 — Apr 2022**

- Fine-tuned GPT-J language models locally in Python for chatbot applications, achieving cost savings of over $200k.
- Designed clustering-based QA models in PyTorch for user query resolution, achieving 85% accurate resolution of user queries.

Lead Software Engineer, FindMonster **Jan 2021 — Jul 2021**

- Created AR gameplay experiences using Niantic ARKit, incorporating real-world environmental awareness.
- Implemented semantic segmentation models to identify and classify natural objects for accurate AR object placement with an IoU score > 0.7.

Lead Software Engineer, TheGGLife **Jan 2020 — Dec 2020**

- Engineered server architecture in Node.js for live streaming, supporting real-time interaction for games with audiences averaging 150k+ concurrently via WebSockets.
- Developed Unity-based multiplayer games with live-stream integration, incorporating NLP for command-to-gameplay translation in PyTorch with 94% classification accuracy.

PROJECTS

LedPulse – AI-Powered Computational Art Installation **Dec 2024**

- Developed an AI pipeline in Python for Dragon, LedPulse's volumetric display, using small language models to transform speech into real-time abstract musical visuals based on emotional and tonal analysis.

PUBLICATIONS

- "Classier Guided Diffusion for Image Inpainting. Applications to Fine Art", Accepted at LXAI at ICML 2022

SKILLS

- Languages: Python, Go, TypeScript, JavaScript, SQL
- Frameworks & Libraries: FastAPI, Flask, Django, Node.js, PyTorch, TensorFlow
- Infrastructure: Docker, Kubernetes, AWS, Terraform, Prometheus, NGINX, Apache
- Databases & Messaging: PostgreSQL, Redis, Kafka, ElasticSearch, Snowflake, MQTT
- DevOps & Tooling: GitHub Actions, Celery