# Niranjan Krishna

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Software Engineer with 5 years of experience, with expertise in Python (backend development, data analysis) and TypeScript/JavaScript (frontend development).

## Experience

### Formant

Application Engineer (*Nov 2022 – Apr 2025*)

- Designing and building a large-scale fleet management portal in TypeScript (React) and Python microservices, powering real-time operations for 20,000+ robots.
- Engineered core libraries and pipelines (Python, Go) using low-level networking protocols (gRPC) and robotics middleware (ROS2) for real-time robot control and communication.
- Built performance analytics tools leveraging Snowflake and Python to process over 1M data points real-time with minimal latency for operational insights.

### Reknow.ai

AI Engineer (*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.

### FindMonster

Lead Software Engineer (*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 (intersection-over-union) score of >0.7.

### TheGGLife

Lead Software Engineer (*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 @ Future Unfold (*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

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

## Skills

Languages: Python, TypeScript, JavaScript, SQL.

Frameworks & Libraries: React, Next.js, Node.js, Django, Flask, Vite, PyTorch, Tensorflow, Hugginface, Ollama.

Infrastructure: AWS, Kubernetes, Terraform, Docker, Celery, Prometheus.

Database: PostgreSQL, MySQL, MongoDB, Redis.