Niranjan Krishna

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Software Engineer with 5 years of experience in Robotics, Architecture and Artificial Intelligence

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, C++, Go, C#, SQL
Frameworks & Libraries: ROS2 (Nav2, tf2), gRPC, Protobuf, React, Django, PyTorch, TensorFlow
Infrastructure: Docker, Kubernetes, AWS (EC2, S3, IoT Core), Terraform, Prometheus
Misc: Snowflake, MQTT, Redis, GitHub Actions, Celery, PostgreSQL, hardware-in-the-loop (HIL) testing