ARJAN GUPTA

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TECHNICAL SKILLS

Programming Languages:	C, C++, Python, JavaScript, URDF, Bash, MATLAB
Robotics/AI Frameworks:	ROS2, Gazebo, OpenCV, PyTorch, YOLOv7
Broad skills:	Deep reinforcement learning, computer vision, embedded systems, sensors

EDUCATION

Worcester Polytechnic Institute
Master of Science in Robotics Engineering, GPA: 4.00/4.00 — August 2022 — present
Autonomous Vehicles Specialization

University of Kansas
Bachelor of Science in Computer Engineering, Mathematics Minor — August 2013 — May 2017

WORK EXPERIENCE

Ainstein AI — Lawrence, KS (Hybrid)
Senior Embedded Software Engineer — *November 2023 — present*

- Developing radar sensing systems for golf shot tracking

Lev Technologies — Remote
Co-Founder & Engineering Expert — *June 2023 — present*

- Helped launch the usage of custom-trained YOLOv7 object detection model to help daycare workers
- Designing the edge strategy to deploy the system on a Jetson Nano for real-time inference
- Collaborating with other founders to develop the technical road-map

Lindsay Corporation — Olathe, KS (Hybrid)
Embedded Software Engineer II — *December 2021 — November 2023*

- Enhanced the firmware on the Smart Pivot to use GPS-path planning over MQTT
- Mentored entry level engineers and interns, guided them with debugging and profiling tools
- Served as a technical lead on Smart Pivot main UI panel, responsible for the entire software stack
- Developed wrappers for drivers to support on-board chips and sensors
- Completed a hardware & firmware replacement of Sub-GHz mesh network on a legacy product

AGI SureTrack — Lenexa, KS (Hybrid)
Embedded Software Engineer I & II — *October 2019 — December 2021*

- Helped maintain LiDAR product with a 3 DoF robotic arm for grain inventory management
- Coordinated engineering work as a team lead, guided productivity and helped meet milestones
- Owned the product development and commercial launch of a new IoT Gateway product
- Designed and implemented backend web-services for automated firmware updates

ZOLOZ — Kansas City, MO (On-site)
Software Engineer — *June 2017 — October 2019*

- Developed and maintained biometric matching systems for a 2 DoF camera (pan-tilt)
- Implemented and optimized C++ image scaling and compression algorithms
- Supported the R&D department to fine-tune several computer vision models for object detection

PROJECTS

- **Autonomous Drone Simulation** — replicating a state-of-the-art research paper that uses deep reinforcement learning to train a drone to fly through a room and avoid obstacles
- **6 DoF Robotic Arm** — assembled arm, wrote its controller and kinematics in Python, and moved it using servos and a Raspberry Pi. Designing a computer-vision based localization system for it

COURSE CERTIFICATES

Coursera

Neural Networks and Deep Learning	Issued May 2023 | Credential ID R6Q353L77JC6
Machine Learning	Issued Aug 2022 | Credential ID KKFMWZ7WZCF7