Arjan Gupta

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Technical Skills

Programming:	C, C++, Python, JavaScript, URDF, Bash, MATLAB
Robotics:	ROS2, Gazebo, Isaac Gym, robot control theory, kinematics, dynamics, path planning
AI Frameworks:	PyTorch, OpenCV, YOLOv7, TensorFlow
Protocols:	PWM, UART, SPI, I2C, MQTT, HTTPS
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

Vermeer Corporation — Pella, IA (Remote)
Autonomy Engineer II — *February 2024 — present*

- Owning and designing the localization and navigation autonomy module (GNSS with some perception)
- Developed industry-standard, high-level system engineering requirements for autonomy modules
- Mentored interns and reviewed C++ code used to develop a ROS2 simulation stack for the A2A team
- Facilitated technical proposals with GNSS vendors that provide RTK correction and J1939 messaging
- Owning the Autonomy Safety module within the A2A team, abiding by ISO standards 17757 and 18497

Ainstein AI — Lawrence, KS (Hybrid)
Senior Embedded Software Engineer — *November 2023 — February 2024*

- Improved radar sensing systems for golf shot tracking system
- Implemented sensor fusion algorithms for radar and camera data

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

- Directed technical troubleshooting of a YOLOv7-based child-security system at daycares
- Architected the edge strategy to deploy the system on a Jetson Nano for real-time inference

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

- Enhanced the firmware on the Smart Pivot to use GPS-based path planning for irrigation
- 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

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

- Developed LiDAR product with a 3 DoF robotic arm for grain inventory management
- Owned the product development and commercial launch of a new IoT Gateway product

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

- Developed and maintained computer-vision biometric systems for a 2 DoF camera (pan-tilt)

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