

SUMMARY

Robotics field engineer focused on commissioning, validating, and sustaining autonomous systems in production. At Wayve, I serve as the quality gate between software development and public-road deployment—vehicle bring-up, release validation across OS, models, and sensors, and safety-critical debugging. Previously at Rapyuta Robotics, I deployed and supported 80+ AMRs and autonomous forklifts across eight sites in Japan, led warehouse integrations, and improved deployment reliability through simulation and on-robot connectivity.

EXPERIENCE**Wayve Technologies, Tokyo, Japan: Robotics Field Engineer** Nov 2025 – present

- Commission AVs end-to-end: bring-up, OS setup, sensor calibration, road-readiness before deployment.
- Quality gate for releases: OS builds, NN models, sensor configs, integrations before fleet rollout.
- Debug ECU, CAN/DBW, and sensor-perception faults including frequency-sensitive edge cases.
- On-road safety and incidents; escalate field findings to SW, HW, and ops teams.
- Daily diagnostics with ROS, Grafana, Foxglove, GitHub, and Jira in the field.

Rapyuta Robotics, Tokyo, Japan: Robotics Field Engineer Dec 2022 – Oct 2025

- Supported 80+ AMRs and forklifts across 8 Japan sites; 24/7 ops and troubleshooting.
- Built pre-deployment simulation pipeline; improved deployment reliability by over 50%.
- Led Ehime and Tokyo forklift bring-ups: PLC integration, testing, and go-live.
- Pioneered on-robot LTE; cut warehouse network setup costs by 70% at rural sites.
- Integrated forklifts with PLCs, conveyors, elevators; mapped customer needs to software team.

PROJECTS**Master Project: Tele-operation and Resilient Peg-in-Hole Assembly with Kuka iiwa Robotic Arm** Dec 2021 – Jul 2022

Achieved resilient peg-in-hole assembly by combining tele-operation, haptic device, force feedback, shared autonomy.

- Tackled the challenge of assembling cylindrical objects in tight holes, surpassing the robot's accuracy limitations.
- Integrated computer vision techniques and implemented various control methods (full autonomy, bilateral teleportation with force feedback, shared autonomy, imitation learning and learning from demonstrations for knowledge transfer)
- Utilized advanced industrial hardware (Kuka LBR iiwa with ROS) and touch haptic devices for enhanced user interaction, performing a benchmark task with a tight clearance resulting in improved assembly performance with highest accuracy.

Bachelor Project: Tele-operated Virtual Reality Control of a 7-DOF Industrial Robotic Arm Oct 2019 - Jul 2020

Collaborated in a team of four to control and integrate Robot arm for digital twin, achieving first place in AIOT Egypt challenge

- Designed and built a full Teleoperation system for controlling a 7-DOF industrial robotic arm using Virtual Reality.
- Implemented a novel approach to integrate Virtual Reality with the robotic arm, utilizing forward and inverse kinematics with ROS along with path and trajectory planning. Increasing robot mobility and mapping real and virtual world .
- Utilized Unity software for seamless integration of virtual reality interactions, UI and robot simulation with ROS.

EDUCATION**M.Sc., Robotics and Computer Vision** Graduating Jul 2022

Innopolis University, Kazan, Russia

4.5/5 GPA

B.Sc., Mechatronics Engineering Graduating Jul 2020

Nile University, Giza, Egypt

Highest Honors - 3.71/4 GPA

TECHNICAL SKILLS

Field & AV: Vehicle commissioning, release validation, CAN/DBW, sensor calibration, fleet ops, incident response

Robotics & Software: ROS, Python, C++, Linux, Docker, Git, Grafana, Foxglove, PLC integration

Languages: Arabic (Native), English (Fluent), Japanese (Basic conversation), Russian (Basic conversation)

PUBLICATION

Robotic Pick and Assembly Using Deep Learning and Hybrid Vision/Force Control, IEEE NIR 2021: Aug 2021