Lead Robotics Engineer

Motion Planning and Control · Founding Team 2027 · AUX-ENG-SD-01

Reference	AUX-ENG-SD-01	**Level**	Senior, 8+ years; leads the robot software team
Reports to	Dr. Mamdouh Yanni, Founder and CTO	**Location**	On site in Dubai, at the first service bay and the pilot workshops
Employment	Full time, UAE employment contract	**Start**	Among the first hires once our Seed round closes (target 2027)

About Auxionetics

Auxionetics Artificial Intelligence L.L.C S.O.C is an IP-led robotics company in Dubai. Our patent-pending technology aims to let people and robots work safely side by side, and its first use will be the Smart Robot Mechanic: a car-service bay in which two collaborative arms will take on the repetitive, physically demanding work while a skilled technician stays in charge of every job. Six US patent applications and an international (PCT) application have been filed. We will run our own workshops in Dubai and license our Human-Robot Collaboration platform once it runs reliably in daily operation.

Why this role matters

You will be the engineer who makes two seven-axis arms work as one team around a real vehicle. Every service procedure we sell becomes, in your hands, safe, repeatable and verifiable robot motion. You will set its architecture, write much of it yourself, and build the team that takes it into two pilot workshops.

What you will own

- **Architecture.** Define the robot software architecture of the bay on ROS 2, from task sequencing and job state to motion execution, fault handling and recovery.
- **Dual-arm motion.** Implement coordinated, collision-free planning for two redundant arms sharing a workspace under and around a vehicle on a lift, including workspace allocation and priority between arms.
- **Force-controlled work.** Deliver contact-rich operations such as locating, loosening and torquing threaded fasteners, with every step measured, verified against limits and logged.
- **Hardware integration.** Bring up the arms, tool changers, force-torque sensors and safety I/O with the Controls and Functional Safety Engineer; agree pose and accuracy interfaces with the Perception Engineer.
- **Simulation first.** Build the simulation and regression tests that every motion must pass before it runs on hardware, and keep them green as the system grows.
- **Engineering standard.** Lead design and code reviews, set coding standards, and own software releases for the bay.
- **Team.** Help hire and lead the robot software engineers who follow you, and mentor our summer intern AUX-INT-SD-02 each year: a defined 16-week project, weekly reviews and the final assessment.

Minimum qualifications

- A degree in robotics, mechanical, electrical or computer engineering, or computer science.

- 8+ years building robot software, including at least one manipulation system taken from prototype into daily operation.
- Expert C++ and Python on Linux; deep experience with ROS 2 and MoveIt 2 or an equivalent planning framework.
- Strong grounding in the kinematics, dynamics and control of redundant (seven-axis) manipulators.
- Hands-on force or impedance control in contact tasks, and clear written English.

Preferred qualifications

- A master's degree or PhD in robotics, control or a related field.
- Dual-arm or mobile manipulation, and admittance control in production.
- Collaborative arms from KUKA, Franka, Universal Robots, ABB or FANUC.
- Real-time or safety-rated software; automotive experience; leading a team through a first product.

Your first year

By	What success looks like
3 months	Robot software architecture agreed and documented; simulation environment of the bay running; first arm integrated on the bench.
6 months	Both arms running coordinated service sequences on test vehicles, with cycle times and faults measured.
12 months	Bay safety-assessed and software running in the first pilot workshop; a team of robot software engineers hired and productive.

How we work

- Safety by design. The bay will be engineered to ISO 10218-1/-2:2025 from day one; all work near robotic equipment follows a documented risk assessment and safety induction.
- **Measured, not claimed.** Targets are measured on real vehicles; simulation before hardware, review before merge.
- **Planned tools:** ROS 2, MoveIt 2, C++ and Python on Linux, Gazebo-class simulation, embedded GPU compute.

What we offer

- A founding role, working one-to-one with a founder who has almost 30 years of engineering experience, including 12 in Silicon Valley.
- Named-inventor recognition for inventions you contribute to.
- A competitive salary; company-paid visa, work permit and health insurance; annual leave and end-of-service gratuity under UAE law.

Conditions. Every offer is conditional on the close of our Seed round, satisfactory checks, a UAE work permit, and an agreement assigning to the company the IP created in employment.

How to apply. Email your CV and a short note on the most relevant system you have built to careers@auxionetics.com, quoting AUX-ENG-SD-01. Shortlisted candidates will have a technical interview and a practical design review with Dr. Mamdouh Yanni. CVs are used only for recruitment and deleted within 12 months unless the candidate joins us. **Auxionetics is an equal-opportunity employer** and selects on merit alone.