Robotics Software Engineering Intern

Motion Planning and Simulation · Summer 2027 Internship · AUX-INT-SD-02

Reference	AUX-INT-SD-02	**Program**	Paid summer internship for university students in the UAE: 16 weeks from early May 2027
Mentor	Lead Robotics Engineer (AUX-ENG-SD-01); oversight by Dr. Mamdouh Yanni	**Location**	Hybrid, Dubai: weekly in-person mentor sessions; other work remote
Schedule	Full time, up to 40 hours a week, set to meet your university's credit requirements	**Stipend**	Paid monthly; amount set in the training agreement
Who can apply	Computer, Electrical or Mechatronics Engineering, or Computer Science. Students eligible for their university's credit-bearing internship (senior standing, as the university defines it).		

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 internship matters

Two robot arms working on one car must never collide with each other, the vehicle or the technician, and every second of cycle time matters. We will test every motion in simulation before it reaches hardware. You will build the simulation and motion-planning tools that make that possible.

Your project

- **Simulation.** Build a simulation of the two-arm collaborative cell in ROS 2 with Gazebo or NVIDIA Isaac Sim, using real arm and vehicle models.
- **Motion planning.** Implement coordinated two-arm motion planning, for example with MoveIt 2; benchmark planners on agreed service tasks and recommend one with evidence.
- **Test harness.** Build an automated harness that checks each motion for collisions, joint limits and cycle time before it is approved.
- **Code quality.** Write clean, tested and documented code in a shared repository, with code review and short weekly technical notes.

Minimum qualifications

- Studying for a bachelor's degree in Computer, Electrical or Mechatronics Engineering, or Computer Science.
- Strong Python or C++, and comfort with Linux and Git.
- Coursework in linear algebra and in robotics, control or kinematics.
- Clear written English, and the discipline to deliver independently between sessions.

Preferred qualifications

- Experience with ROS or ROS 2, Gazebo, Isaac Sim, MoveIt or PyBullet.
- Robotics competitions or research projects.
- A public GitHub portfolio with code you can show.

Your 16 weeks

Weeks	What success looks like
1–2	Development environment and simulation set up; project targets agreed with your mentor.
3–8	Two-arm cell running in simulation; first coordinated motions planned and timed.
9–14	Test harness running on every motion; planner benchmark complete and reviewed.
15–16	Final report, documented code and a live demonstration delivered; handover to the robotics team.

How we work

- **Safety first.** No intern operates robotic equipment without supervision and a documented safety induction; all work near the cell follows its risk assessment.
- **Measured, not claimed.** Set targets with your mentor, measure them, and report what you find, including what did not work.
- **Written and reviewed.** Weekly one-to-one reviews, short written notes, and every deliverable reviewed before use.

What you will gain

- **Real ownership.** A defined project whose results will feed directly into the first robotic service bay.
- **Mentoring.** Weekly one-to-one time with a founding-team member, and oversight from a founder with almost 30 years in engineering, including 12 in Silicon Valley.
- **Academic credit.** A final report and presentation prepared to support your university's assessment, and a reference letter on successful completion.
- **A route in.** Strong interns will be considered first for graduate roles as our team grows.

Conditions. A written training agreement (training areas, duration, hours and stipend); a student training permit from the Ministry of Human Resources and Emiratisation (MoHRE) and a no-objection letter from your university; the candidate and intern confidentiality agreement, and an assignment of intellectual property created during the internship. Interns never pay any fee. Each internship opens only if our Seed round has closed and its mentor has been in post for two months by May 2027; we will confirm by 31 January 2027.

How to apply. Email your CV, transcript and a link to your GitHub or project work to careers@auxionetics.com, quoting AUX-INT-SD-02 in the subject line. We can also work through your university's placement process. Shortlisted candidates will meet Dr. Mamdouh Yanni, with the mentor where in post, for a 45-minute interview in February or March 2027. 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.