Perception and Data Intern

Vehicle Perception · Summer 2027 Internship · AUX-INT-SD-03

Reference	AUX-INT-SD-03	**Program**	Paid summer internship for university students in the UAE: 16 weeks from early May 2027
Mentor	Perception Engineer (AUX-ENG-SD-04); 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

Before a robot can service a car, it has to find the car and its service points accurately, on every make and model and in real workshop lighting. That starts with good labeled 3D data. You will build the first datasets and baseline models our perception work will grow from.

Your project

- **Datasets.** Collect and organize open 3D vehicle datasets, checking each one's license before use.
- **Simulated scenes.** Generate simulated point clouds of vehicles in a service bay, varying vehicle type, pose and lighting.
- **Labeling.** Label vehicles and service points, and build simple tools that make labeling faster and more consistent.
- **Baseline models.** Train and benchmark baseline detection models, and report accuracy honestly, including where they fail.
- **Documentation.** Keep datasets, code and results versioned and documented in a shared repository, with short weekly notes.

Minimum qualifications

- Studying for a bachelor's degree in Computer, Electrical or Mechatronics Engineering, or Computer Science.
- Python with NumPy, and PyTorch or OpenCV.
- Coursework in linear algebra and in computer vision or machine learning.

- Clear written English, and the discipline to deliver independently between sessions.

Preferred qualifications

- Point-cloud tools such as Open3D or PCL.
- Blender, Gazebo or other simulation tools.
- Research projects, competitions or a public GitHub portfolio.

Your 16 weeks

Weeks	What success looks like
1–2	Data sources and licenses reviewed; labeling scheme and targets agreed with your mentor.
3–8	First labeled dataset built from open and simulated data; labeling tools working.
9–14	Baseline models trained and benchmarked; results and failure cases reviewed.
15–16	Final report, versioned dataset and code delivered; handover to the perception 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-03 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.