Embedded and Electronics Engineer

Sensors and Tooling · Series A Team · AUX-ENG-SA-03

Reference	AUX-ENG-SA-03	**Level**	Mid to senior, 5+ years
Reports to	Dr. Mamdouh Yanni, Founder and CTO; day to day, the Lead Robotics Engineer	**Location**	On site in Dubai, at the first service bay and the pilot workshops
Employment	Full time, UAE employment contract	**Start**	From our Series A round

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

Smart tools need reliable electronics. You will design the sensors, boards and firmware inside our end-effectors and around the bay, so that every tool reports what it is doing and every measurement can be trusted.

What you will own

- **Tool electronics.** Design the sensing and control electronics inside our service tools: torque, position, temperature and fluid sensing.
- **Firmware.** Write embedded firmware for microcontrollers, with robust communication to the robot software.
- **Sensor interfaces.** Integrate industrial sensors and fieldbus interfaces into the bay.
- **Bench test.** Build the bench test rigs that verify every board and tool before it reaches the bay.
- **Reliability.** Design for heat, oil, vibration and electrical noise in a workshop environment.
- **Documentation.** Release schematics, layouts and firmware with full documentation and version control.
- **Interns.** Mentor one summer intern a year from our internship program (Embedded Electronics): a defined 16-week project, weekly reviews and the final assessment.

Minimum qualifications

- A degree in electrical or electronic engineering.
- 5+ years designing embedded hardware and firmware taken into production.
- Embedded C/C++ on ARM microcontrollers; schematic capture and PCB layout.
- Sensor signal conditioning and industrial communication (CAN, EtherCAT, RS-485 or similar).
- Clear written English.

Preferred qualifications

- Inertial, force or position sensor calibration.

- Industrial or automotive electronics qualification.
- Embedded Linux.
- EMC design and testing.

Your first year

By	What success looks like
3 months	Tool electronics reviewed; next-generation architecture agreed.
6 months	Next-generation instrumented tools in bench test, with tests for every unit.
12 months	Tool electronics deployed across the network, with documented reliability data.

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:** KiCad or Altium, embedded C/C++, RTOS, CAN or EtherCAT.

What we offer

- An early role in a company set to scale its robotic workshops, working closely 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 Series A 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 board or firmware you have shipped to careers@auxionetics.com, quoting AUX-ENG-SA-03. Shortlisted candidates will have a technical interview and a 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.