

Embedded Systems Engineer (Firmware / Electronics / Control Systems) for Robotics and AI Start Up

Job Title: Embedded Systems Engineer

Reporting To: Head of Product Development

Deadline & Term: ASAP, Permanent, Full Time

Package: Salary + Performance Related Pay + Options Scheme

Location: SW London (Earlsfield) or Newcastle

The role:

Q-Bot is a high tech, high growth, international start-up, developing robotics and intelligent systems that will revolutionise the built environment. The company is looking to hire a talented Embedded Systems Engineer, to join a rapidly growing, multidisciplinary product development team. The ideal candidate would be comfortable working in close proximity to the silicon, have a degree and work experience in a relevant subject such as Electrical, Software or Control Systems Engineering, and have at least 5 years professional experience. This is a hands-on-role with an emphasis on architecture, design and development, from conceptualisation through to delivery. The successful candidate will be responsible for ensuring the company's embedded systems perform as required, are usable, reliable and can be scaled. They will structure the development program, and help to shape the direction of future research and development.

This is an excellent opportunity to get involved high growth company as it scales, work within a creative and dynamic team, with many opportunities for career progression. To make the most of this exciting opportunity Q-Bot is looking for someone who is ambitious, driven, passionate about robotics/AI, and who will be motivated by seeing their efforts have a real and lasting impact. The successful candidate will be rewarded with an exciting and diverse role, and influence to shape the engineering vision and strategy of the company. Salary will depend on experience and the successful candidate will also be invited to take part in the Employee Share Option Plan (ESOP).

Duties of the job:

- Providing technical leadership for the company's embedded systems: identify technical requirements, creating specifications, put in place plans, manage projects and report on progress.
- Development of embedded systems for the control of robotic devices including the design of system architecture, electrical circuits for embedded microcontrollers and motor control.
- Writing firmware and embedded code to interface with hardware, sensors, drivers and microcontrollers.
- Take responsibility for quality control, perform tests, problem diagnosis, and debugging.
- Coach others and ensure good knowledge transfer, both within the team and across the business.
- Visiting customer sites to understand stakeholder requirements and analyse performance in situ.

Essential requirements:

- A good degree in Control Systems, Instrumentation, Electronics, Embedded Systems or Robotics Engineering.
- A minimum of 5 years relevant professional work experience.
- Good working knowledge of electrical and control system theory.
- Experience developing low level firmware and drivers for a variety of embedded microcontrollers and microprocessors in C/C++.
- Experience with a variety of communications protocols including: UART, I2C, SPI, SSI, CSI, RS-232/422/485, CAN, USB, Ethernet, MMI/RMMI and Wifi.
- Experience designing customised PCBs such as DSP boards or embedded microcontrollers.
- Familiar with centralised and decentralised motor control architectures.

- Experience working with debugging tools.
- Ability to work to deadlines and to high short project timescales.
- Excellent written and verbal communication skills (English).
- Must be eligible to work in the UK without restriction.

Desirable skills:

- Experience developing high-bandwidth, high-fidelity current/voltage control loops for DC motors.
- Experience with real time and low latency systems.
- Experience with interface and communication protocol development for embedded PCs, using real-time Simulink and associated packages.
- Ability to use conventional system stability assessment tools, such as Bode/Nyquist plots.
- Knowledge of dynamical modelling.
- Experience with ROS and / or robotic systems.
- Motivated, goal oriented, shows initiative and diligent.

About Q-Bot:

Q-Bot is a high-tech start up at the forefront of robotics, sustainability and the built environment designing and building robots that help install insulation in existing homes at a fraction of the cost and disruption associated with traditional methods. The company counts a number of Local Authorities and Social Landlords among its customers.

The intelligent construction robots developed by Q-Bot have a number of benefits:

- They empower operators, making them more efficient and productive.
- They allow easier, cheaper, safer and more effective execution of tasks than traditionally possible.
- They create buildings that are energy efficient, cheaper to run and more comfortable.

The company has a highly innovative technology platform with many exciting applications, a creative approach to tackling climate change, combined with a strong social agenda, helping people in fuel poverty and working with our customers to ensure a positive impact within the local community. The company's offices are based in Earlsfield, Wandsworth (South West London). Q-Bot is an equal opportunities employer and welcomes applications from all suitably qualified persons regardless of their race, sex, disability, religion, belief, sexual orientation or age.

Please apply to: future@q-bot.co with a covering letter and CV. **Please note:** no recruitment agents, thank you.

