

Embedded Systems Engineer (Robotics / Firmware / Software / C / C++)

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: London (Wandsworth)

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 Software, Electronics, 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.
- 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 working with debugging tools.
- Experience with a variety of communications protocols including: UART, I2C, SPI, SSI, CSI, RS-232/422/485, CAN, USB, Ethernet, MMI/RMMI and Wifi.
- Excellent written and verbal communication skills (English).
- Must be eligible to work in the UK without restriction.

Desirable skills:

- Experience developing high-bandwidth control loops for motors.
- Familiarity with centralised and decentralised motor control architectures.
- Experience with real time and low latency systems, interface and communication protocol development for embedded PCs using real-time packages such as Simulink and / or dynamic modelling.
- Ability to use conventional system stability assessment tools, such as Bode/Nyquist plots.
- Experience with ROS and / or robotic systems.

About Q-Bot:

Q-Bot develops intelligent tools using robotics and AI that can inspect, monitor and maintain the health of our buildings and infrastructure. Q-Bot's mission is to transform the built environment with robotics and AI to become a global leader in construction innovation.

Initial research efforts developed a method of applying under floor insulation using a [robotic device](#) without the hassle and cost of traditional methods. As a result of this work Q-Bot has developed a number of exciting robotic and AI technologies which include robotic vehicles, digital manufacturing and 3D printing, control routines for autonomous localisation and navigation, 3D mapping of environments with automatic categorisation of features, as well as tools to manage the installation process and data collected. The solutions developed by Q-Bot have a number of [benefits](#):

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

The company has a growing team of over 25 employees in offices in London and Newcastle. Q-Bot is run by an experienced management team with an entrepreneurial track record, project management expertise and unique blend of robotics and building know how. The company's employees are a unique blend of engineers with Masters and PhDs in Science or Engineering and professionals with decades of practical experience in the construction sector.

Q-Bot is an equal opportunities employer and welcome 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.

