

Job Specification

Software Engineer

Responsible to: Head of Software Engineering

Grade of post: Senior/Principal

Salary: To be agreed

Hours of work: 37 hours per week

Work location: Oakley, Bedford

Role Purpose:

You will be required to support a mixture of R&D and product development activities within a leading autonomy and unmanned systems company. Blue Bear continuously innovates within the core area of Unmanned Aerial Systems (UAS/UAV) such as autopilots, mission systems, ground control stations, and all supporting systems and infrastructure.

You will be keen to get involved in all development areas, and have a good track history / proven track record in both problem solving and quality software development.

Your role as a Software Engineer will involve Architecting, implementing and testing embedded applications and system software. This will include improving existing software and developing new features.

Working as part of a team in a multidisciplinary environment you will have good communication skills. A can-do attitude and a genuine passion for innovative technology will be advantageous. The opportunity will enable the successful candidate to gain knowledge of cutting-edge autonomous systems.

Key Responsibilities

- Primarily, your role will be to architect, implement and test mission critical applications and software for our existing and new products, written in C++ and/or Java.
- Ensure software redundancy, real-time, safety and security objectives are met.
- You will be responsible for delivery of technical work and documentation.
- Gain system wide knowledge and become a subject matter expert.
- Proactively engage with other engineers, teams and leadership to ensure needs are understood and met
- Work as a team to deliver, maintain and innovate the UAV mission system and individual modules within the mission system.
- Get involved in simulation testing, flight testing and bug fixing.

Other Duties and Responsibilities

- To undertake such other duties and responsibilities as may be reasonably required within the grade and level of the post.
- To actively participate in Blue Bear's Performance Management Scheme.
- You will be expected to perform different tasks as necessitated by your evolving role within the company and the overall business objectives of the company.
- Some travel within the UK may be required.

Essential skills:

- Experience with one or more modern Object-Oriented Languages such as C++ or Java.
- Working knowledge of Linux and/or real time operating systems such as FreeRTOS.
- Good understanding of development tool chain for debugging and problem solving.
- Quality mindset with a test driven development approach.

Other useful skills for this role:

- Use of C on embedded systems.
- Testing and automation experience.
- Team leading and mentoring junior engineers.
- Experience with quality standards (esp. DO-178 or similar will benefit greatly).
- Good communication skills for internal and external technical discussions.
- Knowledge of any of the following DDS, GIS, MISRA C++
- Project management experience.

Equality and Diversity

We are committed to the promotion of equality of opportunity in all of our activities and to encouraging access to our organisation from all groups irrespective of the equality strands. We are working to create an environment in which cultural diversity and individual difference are positively valued in an atmosphere free from harassment and discrimination. We take our legal and moral obligations with respect to equal opportunities seriously and welcome dialogue with individuals on ways in which our equal opportunities policies and practice can be enhanced.

Health and Safety

The organisation together with the assistance of all employees are fully committed to developing a positive safety culture.

We encourage and support employees becoming involved in and participating in health, safety and welfare matters. Our goal is to motivate and empower all employees to work safely and protect their long-term health, not simply to avoid accidents.

PERSON SPECIFICATION

| Education/Qualifications | S/L | I | A |
|---|------------|----------|----------|
| <i>Desirable:</i> | | | |
| • Degree in Software Engineering or SMET discipline (e.g. Maths or Physics) with a demonstrable aptitude for Software Engineering | X | | |
| Knowledge and Experience | | | |
| <i>Essential:</i> | | | |
| • Software architecture and technical leadership | X | X | X |
| • Service Orientated Architecture (SOA) | X | X | X |
| • Software architecture | X | X | X |
| • Java 8/11 OR C++ 11/14/17 | X | X | X |
| • Ethernet (UDP, TCP) | | X | |
| • Multi-threading | X | X | |
| • Software development lifecycle – including unit and integration testing | | X | |
| • Refactoring and maintenance | | X | |
| • Regression testing (auto build and auto test frameworks) | | X | |
| • Technical author – requirements, design, test, user | | X | |
| • Mature engineering - quality development | | X | |
| • Configuration Management (e.g. git) | | X | |
| <i>Desirable</i> | | | |
| • 5+ years of experience | | X | |
| • Linux / Unix environment | | X | |
| • Unit and Hardware-in-the-loop testing | | X | |
| • Unified Modelling Language (UML) | | X | |
| • Enterprise Architect or similar UML tool | | X | |
| • Integration with electronics | | X | |
| • Avionics background | | X | |
| • Scrum and Agile | | X | |
| • JIRA - Application Lifecycle Management tool | | X | |
| Personal/Behavioral Attributes | | | |
| <i>Essential:</i> | | | |
| • Ability to work to tight deadlines | | X | |
| • Creative and innovative thinker and planner | | X | |
| • Excellent problem-solving skills | | X | |
| • Team player and possible leader | | X | |
| • Good analytical and communication skills | | X | |
| • Passion for innovation | | X | |
| • Excellent writing and speaking skills | | X | |
| Other Requirements | | | |
| Subject to security vetting to a minimum BPSS level (further security vetting based on position) | X | | |

S/L = Short Listing I= Interview A=Assessment