**Embedded Software Engineer**

at Overair, Inc.

Santa Ana, CA

**Company Overview**:

At Overair, we are dedicated to bring next generation sustainable air transportation to everyone.  Our answer is Butterfly, an all-electric vertical takeoff and landing (VTOL) aircraft designed to safely and affordably carry passengers over traffic and congestion.  Butterfly leverages over two decades of VTOL aircraft development, patented VTOL technology, and flight vehicle experience.

Overair believes in the lofty goals of sustainable air mobility and we are committed to solving the hard challenges along the way.  We are building an industry leading team covering an expanse of skills, talents, and expertise in order to build a superior electric VTOL aircraft.  If you enjoy solving difficult problems, and seeing your ideas and visions expressed in flying aircraft, we want you on our team.

**Job Overview**:

Overair is looking for an Embedded Software Engineer to take ownership of embedded software design for advanced motor controllers. These families of motor controllers will be applied on various aircraft systems, including propulsion and flight control actuation. They will be responsible for design and development of the embedded software while working closely in conjunction with mechanical, electrical, and other engineering teams.

**Roles and Responsibilities:**

* Develop highly reliable software systems
* Develop motor controller firmware architecture
* Board bring-up of next-generation motor controllers
* Write interface code for sensors and digital communication
* Develop prototypes to prove out key design concepts and quantify technical constraints
* Write high quality structured bare metal software for embedded processors (e.g. ARM, PowerPC, x86)
* Design embedded software to meet requirements including verification and traceability
* Work with power electronics, motor design, and electromechanical engineers to develop motor control systems

**Required Qualifications:**

* Bachelor's degree in Computer Science, Electrical Engineering, or related field and 4+ years of experience in systems-level C (kernels, device drivers, hypervisors)
* Extensive experience and mastery of C and/or C++ programming
* Knowledge and experience with real-time software
* Knowledge of and experience with communication protocols including I2C, CAN, SPI, UART, etc.
* Extensive understanding of embedded software principles and ability to conduct code reviews
* Hands on experience with building and debugging hardware/firmware systems
* Strong skills in debugging, performance optimization and unit testing
* Creative approach to problem solving and exceptional analytical skills

**Desired Qualifications:**

* Experience with DO-178 and DO-254 or similar automotive standards
* Knowledge of permanent magnet brushless motor control
* Fluency in Python and other scripting languages
* Prior experience in real time products that required high reliability and fault tolerance
* Hands-on experience using test and measurement equipment such as oscilloscopes, logic analyzers, voltmeters