**Electrical 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 seeking a talented electrical engineer to join our team designing all-electric aircraft. This engineer will work closely with mechanical, software, and other engineering teams to provide complete solutions. This role requires the candidate to thrive in a high paced environment and be comfortable with the design, development, and test life cycle of rapid aerospace R&D. The ideal candidate has experience in developing and supporting electronics though the design lifecycle, from prototype to deployed hardware. They will need to have hands on electronics development experience.

**Roles and Responsibilities:**

* Create clear and readable schematics for digital and mixed-signal printed circuit boards
* Component selection for minimum mass and maximum reliability
* Investigate state of the art technologies for power and data transmission/management
* Work with PCB suppliers to create reliable and low-weight layouts
* Write requirements, participate in FMEAs + create and carry out test and validation plans
* Work closely with the wiring and integration technicians to ensure hardware reflects design intent
* Develop internal wiring harness standards and guidance based on AC 43.13-1B, AS50881, ASTM F2639
* Work across IPT's engineering groups to define wiring system architecture, connections, and routing
* Define subsystem tests to verify and ensure EWIS grounding and EMI rejection performance
* Selection of industry standard components to suit requirements as well as research into custom or new components to fit specific requirements.
* Support testing and aircraft integration, troubleshoot and verify wiring harness builds and installations.
* Configuration and change management of the EWIS system on the aircraft

**Required Qualifications:**

* B.S. in electrical engineering or related discipline
* Strong EE fundamentals, including familiarity with:
  + Power conversion (linear and switching regulators)
  + High-speed digital design and layout
  + Signal conditioning and conversion (ADCs, filters)
  + Discrete semiconductor design (FETs, BJTs, diodes)
  + Digital communication (I2C, SPI, RS422, Ethernet)
* Schematic capture, PCB design, board bring-up
* Design for reliability in high vibration and high temperature environments
* Design for manufacture both for PCBAs and top level assemblies
* Experience with component selection
* Hands-on experience with building and debugging electronics hardware

**Desired Qualifications:**

* M.S./Ph.D. in relevant discipline
* 2+ years of working experience in relevant industry
* High voltage electrical design (400V+)
* Exposure to regulatory certification
* Experience with DO-254, DO-178, DO-160 and other relevant certification standards
* Design for reliability, including use of FMEA
* Designing for HIRF environments
* Embedded C programming in microcontrollers