

Bimotal Sr. Electrical Engineer Job Description

[Bimotal Application Submission](#)

The Company

Bimotal was founded in 2019 to develop innovative micro-electric powertrains for right-sized personal vehicles. We are a group of Tesla, startup, and bike industry alumni working towards our mission of reducing barriers to car-free mobility. In addition to our direct-to-consumer product, Elevate, an easily retrofittable and removable powertrain that converts disc-brake bicycles into e-bikes, we have also partnered with vehicle OEMs (bikes and other micromobility vehicles) to provide them with high-performance powertrains specifically designed for their needs. Bimotal is positioning itself as a technology company with the aim of making the best microelectric powertrains in the world, and eventually, the best personal-sized electric vehicles. Come join us in building the future of transportation.

The Job

As a Senior Electrical Engineer at Bimotal, you will architect world-class electronics for Bimotal's electric powertrains. This is an opportunity to take a high degree of ownership over multiple projects spanning drive inverter design and reliability, BMS design, display driver circuit design, electronic test infrastructure, and more. As Bimotal builds highly integrated systems for a budding micromobility industry, you'll be able to creatively solve problems with fewer constraints. Bimotal is a fast-growing startup; be ready to take a leadership role on your team, constantly push technical boundaries, and tackle unfamiliar and challenging problems.

Responsibilities

- Power electronics design and execution ranging from optimization and architecture studies to schematic creation, prototyping and bringup, reliability, and production
- Drive inverter design, motor controls
- Implementation and debugging of high frequency switching to minimize losses, EMI, and ringing
- DCDC buck-boost converter design
- PCBA bring up and debugging
- PCBA design for manufacturing, utilizing understanding of various manufacturing processes related to PCBA assembly
- PCBA layout
- Design products for compliance (e.g. FCC, UL for stationary systems, aerospace, etc.)

Qualifications

- Analogue and digital circuit design
- Good understanding of mosfets and gate drivers.
- Power electronics experience such as buck boost, flyback, DCDC, inverter, etc.
- Experience bringing up and debugging circuit boards
- Strong proficiency with laboratory equipment including oscilloscopes and logic analyzers



- Thorough understanding of microcontrollers and communication protocols
- Excellent reading, writing, and spoken communication skills
- Extremely motivated and excited to take on major responsibility at an early startup
- Preferred - Experience with Python and/or Matlab
- Preferred - Altium schematic and layout capability
- Preferred - Experience with brushless DC motor control (DQ models and control algorithms), classical control systems, or battery management systems

Logistics

Please fill out a [Bimotal Application Submission](#) to apply for this position. Bimotal includes a health insurance stipend, 401k plan, allows for 1 remote work day per week (4 days in person at our Berkeley office), and has flexible PTO as well as regular holidays. Our office is in a beautiful location and is walking distance to many great lunch spots (2 blocks to our favorite burrito spot, Picante), Amtrak, and BART. All employees receive significant equity packages--we want you to have significant ownership in the work that you will be doing here.