Senior Post-Silicon Validation Engineer

About Paradromics

Paradromics is bringing to market the first high-bandwidth data interface between brains and computers. We envision a future where data is medicine and some of the hardest challenges in physical and mental health have been reframed as technical problems with clear solutions. By allowing direct readout and modulation of neural activity, brain computer interfaces (BCI) will act like a modem for the brain, allowing it to connect with restorative digital systems. Our first product will be an Assistive Communication Device for patients with severe combined speech and motor deficits as a result of paralysis.

We are an equal opportunity employer. We offer a competitive compensation package with stock options, flexible PTO, and a friendly working environment.

Job description

Paradromics is looking for a Hardware Development Engineer to contribute to the design and testing of key components of our neural implant system. This includes the design, bring-up, and detailed testing of circuit boards and fully custom analog integrated circuits for both prototype and production systems. Experience with bring-up and characterization of complex electronic systems and an in-depth understanding of low-noise analog circuits and digital electronics building blocks are required. Close coordination with other engineers in the team will be essential, therefore excellent communication and interpersonal skills are crucial in excelling at this role. If you like big challenges, working at the frontier of human technology, and have worked on and shipped high-performance electronic hardware in the past, we would like to hear from you.

Required Skills & Experience

- Bachelor's or Master's degree in electrical engineering or a closely related discipline
- 4+ years of experience of bringing up and debugging custom hardware systems (ASICs, FPGAs, advanced sensors, mixed-signal processors etc.)
- Very strong analytical and debugging skills
- In-depth understanding of analog and digital electronics building blocks
- Experience with lab automation systems and custom scripting
- Rapid electronics prototyping skills (microcontroller, analog and digital interfacing, etc.)
- Experience with debugging standard communication busses (I2C, SPI, UART, etc.)
- High degree of proficiency with advanced lab instruments (oscilloscope, spectrum analyzer, logic analyzer, etc.)
- Advanced signal integrity analysis such as jitter and crosstalk
- Proficiency with professional grade PCB design tools
- Excellent programming skills with Python, Tcl, Matlab, etc
- High degree of proficiency with Linux, shell scripting and Linux programming environment
- Proficiency with Git version control system and collaborative software engineering practices
- Attention to detail and ability to dig out obscure information from technical documents
- Excellent verbal and non-verbal communication skills
- Ability to produce well-written technical reports and documentation

Qualified candidates should send cover letter and resume to HR@paradromics.com

Preferred Skills & Experience

- Experience with bring-up and characterization of array-based analog integrated circuits (CCD, CMOS camera, sensor arrays, etc.)
- Experience with wafer probing systems
- Experience with data acquisition platforms (National Instruments, etc.)
- PCB circuit design and layout with Altium Designer
- Signal integrity aware and low-noise PCB layout skills
- Prior experience with ultra low-noise and/or biomedical instrumentation systems
- Experience writing and debugging HDL code
- Programming skills with at least one compiled language (C, C++, Java, Rust, etc.)

Paradromics is an Equal Opportunity Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

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