*n*Line, Inc.
August 11th, 2020

Embedded Engineer Needed

nLine works to improve the reach, reliability, and resilience of the world's most critical infrastructure, including power grids, water systems, and roadway networks. Our initial focus is on improving the reliability of electricity distribution in Sub-Saharan Africa, where power outages are common and repairs are slow. Frequent outages have human consequences, leading to families missing out on the full benefits of refrigeration and lighting, businesses struggling to operate efficiently and enter new markets, and governments lacking data needed to regulate effectively. We use sensors and cloud services to determine when the grid fails and why it fails, reporting what we learn back to utilities, regulators, and the public.

Responsibilities

If you're an embedded developer and engineer with a strong desire to see the products you develop have a positive impact in the world, consider joining our team of Berkeley Engineering grad students and faculty. We're looking for a talented individual to lead the prototyping, programming, testing, and manufacturing of new networked sensors systems that will be deployed on or near the critical infrastructure that we monitor.

Qualifications

We are seeking a candidate with the following strengths:

- ❏ Experience taking an embedded design from idea to a stable working prototype
- ❏ Experience with embedded board design in a common EDA tool
- ❏ Experience with embedded programming in C or C++
- ❏ Knowledge of on-board communication protocols and serial buses (SPI, UART, I2C)
- ❏ Understanding of simple analog sensing front-ends
- ❏ Understanding of basic RF design principles (no need to be an expert)
- ❏ Knowledge of common embedded networking protocols and their underlying communication technologies (BLE, UDP/COAP/DTLS over 2G/3G/802.15.4)
- ❏ Experience using development tools (CLI, Git, CI/CD)
- ❏ Experience fixing yet-to-be-functional prototypes with soldering/rework
- ❏ Experience with or willingness to learn about receiving and storing data from sensors
- ❏ Experience with or willingness to learn about over-the-air firmware updates
- ❏ Experience with or willingness to learn about AC-DC power supply design
- ❏ Experience with or willingness to learn about certifying products
- ❏ Experience with or willingness to learn about optimizing a design to lower cost
- ❏ **Education/Training:**
    - ❏ We expect successful applicants to have at least a few years of work experience or equivalent experience in embedded system design.

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In addition to strong technical skills, a successful candidate will be excited to be part of a passionate and fast-moving team. They will be able to work independently, possess strong written and verbal communication skills, be energized by a fluid and flexible startup environment, identify and amplify our high-impact mission-oriented culture, and:

- ❏ Work effectively with the team to architect the next generation of our technology
- ❏ Independently anticipate and solve problems in a time-sensitive manner
- ❏ Support, strengthen, and improve nLine's mission to improve critical infrastructure
- ❏ Learn about the infrastructure being monitored and help to develop the best sampling strategies for the most critical performance metrics
- ❏ Help define best practices around testing and deployment of new hardware, firmware, and software
- ❏ Collaborate with mechanical designers and data scientists to create elegant end-to-end products
- ❏ Positively grow nLine's company culture into one of diversity, acceptance, and respect
- ❏ Help grow the company through recruiting and retaining other excellent employees
- ❏ Learn new skills and adapt to using the most appropriate technologies for a given task
- ❏ Be excited to learn about the challenges related to deploying technologies in cultures outside of their own

Salary and Benefits

Any job offer will be based on competitive market rates (salary, equity, and benefits) for an engineer with similar qualifications. Additionally, the position would likely come with optional opportunities to travel to the regions in which we are deploying sensors, including Ghana, Kenya, and Sierra Leone.

nLine is an equal opportunity and affirmative action employer. nLine will not discriminate on the basis of race, religion, national origin, sex, gender identity, sexual orientation, age, physical or mental disability, veteran status, or any other protected group. All employment is decided on the basis of qualifications, merit, and business need.

How to apply

Please fill out an application at nline.io/jobs/embeddedengineer