



Senior Electronics Designer at **KHETHWORKS**

About Khethworks

At Khethworks (KW), we aim to give small acreage farmers control over their lives and livelihood through affordable, high-quality technology. We make solar powered irrigation systems that enable our customers to farm year round. We developed the irrigation technology at the Massachusetts Institute of Technology (MIT) in the United States. We founded KW in June of 2015 and relocated to India in January of 2016. We are currently a small but hardworking team of 3 and are located in Pune.

Description

In this position you will be in charge of making decisions regarding the electrical design of the product based on data from field trials, user feedback, analytical models, and benchtop experiments. Your goal is to optimize the irrigation product's electrical system for performance, while reducing cost. This role is a big part of our vision for bringing high-quality, appropriate, and ultra-low-cost agricultural products to marginal farmers in east India and across the developing world.

As the senior electronics designer at Khethworks, you will be responsible for driving the design of the electronics forward. In order to effectively design the system, you will need to be able to deeply understand the entire mechatronics system, including tradeoffs between the battery, motor, and solar panel performances and sizing. From laying out the system's architecture to refining the microprocessor controls, you are the expert that makes water flow from the pump at the flip of a switch.

You will also be the main point of contact between the company and any outside electronics design or manufacturing teams. You will work with the outside team to ensure the design and the end units meet the desired functional requirements, which you will set. This relationship will be entirely yours to manage, ensuring the expectations and deliverables from both side are clear and executed. You will report to the CEO and the COO.

Job Goals

The end goal of this position is to ensure the electronic components of the product are optimized for performance, cost and manufacturability. In this position, you will work closely with the COO on the design and specification decisions, as well as any major decisions regarding the work with the electronics contractors. You will also work in tandem with the Senior Mechanical Designer to ensure compatibility between the hydraulic and electronic systems and with regard to the form factors of the electrical and mechatronic components. The two of you, together, deliver the integrated product. You will also work with the Supply Chain Manager to ensure your design decisions can be realized with sourcing and manufacturing.

Success in this position will look like innovating an electronics system where the sum is greater than the parts and delivering an irrigation system that performs better than anything in the market at a price that no one thought was possible. Your work enables small acreage

farmers to know that every single day when they flip the pump's switch, they will be able to harness as much of the sun's power as possible to grow their crops and their livelihoods.

To achieve this success, you will need to work well with your colleagues; maintain a productive relationship with the outside electronics team; present thoughtful and well researched options to the COO for the design of the electronics and the specifications of the mechatronic components; be ready and willing to take on new challenges when they arise.

Qualifications

Required Skills/Experience

- 🌀 Bachelor's degree (or higher) in electrical engineering (or related field)
- 🌀 Mechatronics experience
- 🌀 Experience with embedded hardware projects
- 🌀 Familiarity with solar, BLDC motors, battery selection/management
- 🌀 Intermediate coding abilities (Java, C/C++, etc.)

Bonus Skills/Experience

- 🌀 Experience in circuit design and PCB layout

Personality traits

- 🌀 Reliable
- 🌀 Self-driven
- 🌀 Hardworking
- 🌀 Flexible
- 🌀 Passionate
- 🌀 Team player

Stipend Range

60-85K/month

(Note: Salaries are based on experience and expertise. Range is provided as an estimate.)

How to apply

Please send the following to info@khethworks.com:

- 🌀 A brief note about yourself and your goals
- 🌀 Your CV
- 🌀 Any related portfolio or materials

