

**THE PROBLEM** Currently, in certain impoverished nations high end electrical equipment such as industry standard medical machinery undergoes excess amount of usage and high valued voltage spikes due to insufficient electrical grids in said environments.



## **ELECTRICAL**

Sol Beats PCB not only provides voltage protection to such electrical equipment from excess voltage, it is also meticulously designed to read and amplify the heart wave with five lead inputs, filter any noise from opposing frequencies and convert the signal from analog to digital to display on the screen for the medical provider and patient to use as desired.

## **COMPUTER**

The software side of Sol Beat starts as soon as the leads are connected to the user and the system is powered on. The digital signal is displayed on the screen by the use of algorithms coded in python then allowing the user to interact with the system via pushbuttons to start/stop, save .png and .svg files, zoom in and out, as well as navigate the screen.

## **THE SOLUTION**

Implementing the same caliber of quality electrical systems. Which include certain modular components along with power supplies that can suppress high voltage spikes as mentioned. In this current application we're constructing a semi-modular EKG with a durable power supply/surge protection system.

