

Internship – Embedded Software Engineer for Biosignal Processing

50% or more (available asap)
Master and Semester Thesis also possible

For this position you need to be either a citizen of an EU/EFTA state or in position of a Swiss work permit (C or job-independent B).

Do you want to join a modern and international team which is changing the future of e-textiles?

About Nanoleq – we bring the e to e-textiles

Nanoleq is a Spinoff of ETH Zurich committed to enabling the next generation of e-textiles since 2017. We combine know-how about innovative soft electronic materials, biosignal acquisition and textile engineering to enable a seamless integration of electronic functionality into garments. Following a pragmatic and customer-centric approach, we have developed a complete connectivity solution for e-textiles, featuring stretchable cables and dry body electrodes which are highly comfortable, washable and simplify the manufacturing process. Our customers use our products in a wide range of applications from biosignal monitoring (ECG, EMG, breathing and more) to electrical stimulation for exercise and medical purposes. Further textile sensors are in development – our ambition is to set the standard of health-monitoring textiles and to enable their rapid development and widespread use.

About this position

Currently we are in the development phase on our new wearable data acquisition module and are testing many sensors to see which ones suit our purpose. Therefore, we need to implement the read-out for different sensors, process raw data and analyze sensor performance. You will be focusing on these tasks and be concerned with exciting topics related to ECG electrodes on shirts, pulse oximetry and breathing monitoring.

Your profile

- Master student in electrical engineering, computer engineering or robotics. Experience with and fascination for signal processing algorithms
- Knowledge in C
- Knowledge in data transfer protocols such as UART, I²C and similar
- Experience in Git is a plus
- Comfortable working independently

Your tasks

- Implementing sensor read-out, studying sensor datasheets
- Finding optimal configuration parameters of sensors for different body locations
- Preprocessing and filtering raw biosignal data
- Robust feature extraction in a later stage (potentially as a master thesis or in an extended internship)

What we offer

- 2500 CHF/month for 100%, 1500 CHF/month for 60%, 1250 CHF/month for 50%
- Great responsibility from day one. Grow with us, professionally and personally.
- Exciting daily work: shape the future of smart textiles!
- Friendly and inclusive team spirit.
- Modern culture based on self-responsibility and trust.
- Exciting (and COVID-friendly) team events
- A wide variety of coffee :)

Company philosophy

At Nanoleq, we are proud to work in a team with people of different origins, opinions, appearances, life situations and lifestyles. Every team member is encouraged to provide their ideas and to raise concerns openly. Everybody has their responsibilities and is empowered to make operational decisions without long waiting times. It is OK to make mistakes, this is how we learn and move forward. Strategic decisions are made by the person responsible for a respective topic, but not before listening to the team. Once decisions are made, we are loyal to each other and we pursue the decided goals with dedication. Roles are not cast in stone and every team member is encouraged to challenge the status quo. Finally, we do not forget to have fun together on team retreats, Friday beers and spontaneous get-togethers.

Interested to join us? Write us an email (weydert@nanoleq.com) and tell us why you are the right match for Nanoleq. We look forward to meeting you!