



Biomedical Engineer

Location

Gent (or Brussels / Belgium) – Hybrid / On-site / Remote as relevant

About 3.LIFE

At 3.LIFE, we are redefining cardiovascular health with reACT: a smart, versatile, handheld ECG device designed for diagnostics, monitoring and acute care. By combining advanced AI with personalized reference data, reACT enables earlier detection, continuous monitoring and more responsive treatment for heart disease.

We're expanding our team and looking for a Biomedical Engineer who shares our mission to transform cardiac care through innovation and engineering excellence.

Role Overview

As a Biomedical Engineer at 3.LIFE, you will contribute to the design, development, validation and production of the reACT ECG device. You will bridge hardware, firmware, signal processing, clinical/AI algorithm work, and regulatory requirements.

You will work in a cross-disciplinary team (hardware, software, data science, clinical/regulatory) to ensure our product is accurate, reliable, safe and user-friendly.

Key Responsibilities

Your role will be diverse and hands-on to the success of our mission. You will:

- Design and develop hardware components for the handheld ECG device: sensors, analogue front-end, electrode design, power management, etc.
- Collaborate on firmware development: data acquisition, signal conditioning, filtering, compression, low-power operation.
- Ensure high-quality ECG signal capture suitable for algorithmic analysis; validate signal fidelity, noise suppression, etc.
- Participate in clinical validation studies: define test protocols, help acquire and analyse data, compare performance vs. gold-standard ECGs.



- Support reliability tests, durability, safety, EMC/EMI, biocompatibility of electrodes/materials.
- Work closely with UI/UX or product design to ensure device usability: ergonomics of handheld design, patient safety, easy to use, etc.
- Generate technical documentation: requirements, specifications, test plans & reports, risk analyses (e.g. FMEA), verification & validation.
- Troubleshoot prototypes, support manufacturing handover, assist with scaling up.
- Ensure compliance with medical device regulations & standards (e.g. CE marking / MDR in Europe, ISO 13485, IEC 60601, etc.).
- Stay up to date with relevant advances in ECG technology, sensors, low-power electronics, AI in cardiovascular diagnostics.

Qualifications & Skills

At 3.LIFE, we value curiosity and collaboration. We believe the best candidates are not only technically strong but also motivated by impact and a willingness to grow. We're looking for someone with:

- A degree in Biomedical Engineering, Electrical Engineering, Bioengineering, or related field (MSc/PhD preferred).
- Experience in medical device hardware/firmware development, ideally in ECG or cardiovascular applications.
- Hands-on knowledge of ECG signals, including noise reduction and electrode/tissue interface.
- Skills in embedded systems, microcontrollers, and PCB design/review.
- Familiarity with C/C++ for firmware and embedded signal processing.
- Strong experimental and analytical skills, including validation and statistics.
- Understanding of regulatory and quality standards (EU MDR, ISO 13485, IEC).
- Strong communication (in English and Dutch), documentation and teamwork skills.
- A proactive, detail-oriented mindset with a passion for solving complex problems.



Nice-to-Have

Extra strengths that help you shine:

- Knowledge of AI/ML applied to ECG signals or cardiac diagnostics.
- Experience with wearable or handheld device ergonomics.
- Hands-on exposure to clinical studies or collaboration with healthcare professionals.
- Knowledge of Bluetooth, wireless communication, IoT, or ultra-low-power electronics.
- Prior experience with regulatory submissions or audits.

What We Offer

- You won't just be joining our company, you'll be joining a mission-driven team that wants to save lives with technology. We aim to give you the environment and tools you need to thrive:
- The chance to work on a life-changing product that impacts real patients.
- A dynamic, cross-disciplinary environment where innovation and collaboration are the norm.
- Opportunities for professional development, continuous learning and true ownership of your work.
- A competitive salary and benefits package tailored to your local context.
- Flexible working arrangements to support your work-life balance.

Ready to make an impact in cardiovascular health?

At 3.LIFE, we're not just building technology, we're shaping better futures for millions of people living with cardiovascular disease.

We believe innovation thrives on diverse perspectives. That's why we warmly welcome candidates from all backgrounds and experiences to apply.

If our mission excites you and you can see yourself contributing, we'd love to hear your story.

Every journey begins with a first step, perhaps this is yours.