

LIGHTLY

TECHNOLOGIES

detect. connect. protect.



Hardware Developer Intern

Electronics Engineering · Embedded Systems · Optical
Sensors

About Lightly Technologies

Lightly Technologies, s.r.o. is an innovative deep-tech startup based in Brno, Czech Republic. We develop portable chemical analyzer based on our patented UV-Fingerprint technology that enables rapid, field-ready detection and identification of chemical substances (drugs, pharmaceuticals, food adulterants) in under 10 minutes, without requiring laboratory calibration. Our technology combines advanced photochemistry, bioanalytical methods and machine learning. We work closely with law enforcement agencies including the Czech Police, INTERPOL, and U.S. federal agencies.

About the Role

We are looking for a hands-on engineer to join our hardware development team and contribute to the evolution of a portable chemical analyser. As a Hardware Intern, you will work closely with our hardware and system engineers on real device development — integrating optics, electronics and mechanical components into a functional system. Your work will directly support the transition from research prototype (TRL 5/6) to a robust, field-ready product through rapid prototyping, testing and iteration.

Key Responsibilities

- Contribute to the development and rapid prototyping of the Catcher II hardware platform, including component selection, basic PCB design and hands-on assembly.
- Integrate optical, electronic and mechanical components into a functional measurement system (UV LEDs, optical components, spectrometer etc.).
- Work on sample handling and cartridge concepts focused on solid samples and sample preparation.
- Perform hardware testing, measurement characterisation and data collection from experimental setups.
- Support system-level integration across hardware, firmware and data-processing pipelines.
- Participate in field-oriented testing, including power management, thermal behaviour and robustness of the device in real-world conditions.
- Iterate on prototypes based on experimental results — identifying issues, proposing solutions and validating changes.

Requirements

- Hands-on experience with electronics prototyping — you have built and debugged real hardware (soldering, oscilloscope, multimeter, etc.).
- Basic experience with microcontrollers or embedded systems (e.g. Arduino, STM32, Raspberry Pi) and the ability to write code to control hardware.
- Ability to troubleshoot non-working systems — you are comfortable figuring out why things don't work and iterating towards a solution.
- Interest in working at the intersection of optics, electronics and real-world measurements.
- Proactive, hands-on mindset — you take initiative and don't wait for perfectly defined tasks.
- Working proficiency in English (you don't need to be perfect, but you can communicate).
- Availability for at least 3 months.

What We Offer

- Work on a real, field-deployed hardware system — not a school project or a simulated environment.
- Close collaboration with a small, fast-moving R&D team — you will see how decisions are made and implemented in practice.

- Access to a fully equipped electronics workshop and analytical laboratory at Mendel University, Brno.
- Financial compensation in line with InnovPrecMed project rules.
- Experience across the full hardware development cycle: from prototype iterations to field testing and validation.
- Possibility to extend engagement or join the team on a longer-term basis after the internship.

How to Apply

Send your CV to:

alex.paroulek@lightly.bio