

Quantum Measurement Engineer

Location: Garching (Munich), Germany

Employment Type: Full-time, on-site

About Peak Quantum

Peak Quantum is a quantum hardware startup founded in 2024 and based in Garching near Munich, pioneering error-protected superconducting quantum processors. By embedding error resilience directly into qubit hardware, we reduce error correction overhead and aim to deliver scalable, fault-tolerant quantum computing from the hardware up.

We collaborate closely with academic and industrial partners in ecosystems like the Munich Quantum Valley to co-develop the future of quantum technology. Our approach combines scientific rigor with an engineering mindset, and our performance already exceeds that of incumbent players in QPU reliability.

Your Role

As a Quantum Measurement Engineer at Peak Quantum, you will build and operate cryogenic measurement platforms, develop calibration routines, and design experiments that quantify coherence, fidelity, crosstalk, and noise in our superconducting circuits.

Working with Peak Quantum's novel, error-protected qubit architecture, you will not only apply standard characterization methods but also develop new gate protocols and calibration strategies tailored to these devices. Your work will provide critical feedback to design and fabrication, ensuring that our architectures deliver their error-resilient advantages in practice.

You will establish robust, automated measurement workflows and acceptance tests, making device performance reproducible, comparable across runs, and scalable as we grow.

What You'll Do

- **Set up and operate cryogenic measurement systems** for superconducting quantum circuits.
- **Characterize qubits and resonators:** measuring coherence times, gate fidelities, crosstalk, and noise spectra.
- **Develop and implement new gate protocols and calibration methods** designed specifically for error-protected qubit architectures.
- **Automate experiments and data acquisition** using Python-based control and analysis software.
- **Extract key performance metrics** from experimental data and identify sources of decoherence or error.
- **Collaborate closely with design and fabrication teams**, providing feedback that drives iterative improvements.
- **Maintain and upgrade lab infrastructure**, ensuring reliable and reproducible operation of measurement systems.
- **Document and analyse results**, using structured feedback loops and data to drive continuous improvement.

Who You Are

- You have a MSc or PhD in Physics, Electrical Engineering, or a closely related field.
- You have hands-on experience with **quantum measurement setups, cryogenics, or superconducting circuits**.
- You are proficient in Python for experiment automation and data analysis.
- You have a strong understanding of microwave electronics, RF signal chains, and cryogenic techniques.
- You are familiar with gate calibration methods and qubit control (preferred).
- You have the ability to independently plan, perform, and troubleshoot experiments.
- You are collaborative and communicative, able to work closely with design and fabrication engineers.
- You are fluent in English (written and spoken).

We know that great talent comes in many forms. Even if you do not meet every point on this list, we strongly encourage you to apply. We welcome diverse backgrounds, skill sets, and perspectives, and we are ready to teach.

What We Offer

- **Mission-driven innovation:** Be at the heart of developing error-protected superconducting processors, ensuring that designs translate into real, working hardware.
- **Early-stage responsibility:** As one of our early hires, your measurements will directly guide our prototypes and roadmap.
- **Collaborative environment:** Work in a science-driven team that bridges design, fabrication, and measurement.
- **Professional growth:** Mentoring, training, and the opportunity to grow into a leading role as we expand.
- **Competitive compensation:** Attractive salaries including additional benefits.
- **Corporate fitness programs and health benefits.**
- **Relocation support.**
- **A great place to live and work:** Located in the Munich area (Garching), you will be at the heart of one of Europe's leading quantum technology hubs, surrounded by world-class research and innovation networks. The region combines the cultural vibrancy of Munich with beautiful nature and abundant opportunities for outdoor activities.

How to Apply

Send your CV, a short cover letter describing your measurement experience, and (optionally) an example of a project or experiment you are proud of to careers@peakquantum.de.

If you have questions, feel free to reach out: **we'd love to hear from you.**