

R&D Fabrication Engineer – Superconducting Quantum Hardware

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 R&D Fabrication Engineer, you will shape the next generation of reliable, error-protected quantum processors. You will design, refine, and oversee fabrication workflows, crafting reproducible, high-yield processes that transform proprietary QPU architectures into real, functioning hardware.

Joining Peak Quantum at this early stage means your contributions will have **direct, visible impact**. You will take on ownership and responsibility well beyond a standard engineering role, and as we grow, you will have the chance to **grow personally into leading roles**.

Along the way, you will gain **first-hand experience with cutting-edge fabrication methods and state-of-the-art tools**, working side by side with a team that combines deep academic expertise with practical engineering focus. You will be supported with mentoring and training to expand your skills and establish yourself as a specialist in quantum hardware development.

What You'll Do

- **Develop and refine fabrication protocols** for high-coherence superconducting circuits and our novel error-protected qubit designs: including lithography, deposition, etching, and process control.
- **Enhance reliability and yield** by improving process stability, throughput, and reproducibility.
- **Translate cutting-edge research into production**, adapting and deploying experimental fabrication techniques in a highly controlled clean-room environment.
- **Partner cross-functionally** with design, measurement, and system-integration teams to ensure seamless device progression from wafer to testbed.
- **Document and analyse results**, using structured feedback loops and data to drive continuous improvement.

Who You Are

- You have a MSc in Physics, Electrical Engineering, Materials Science, or a closely related field (a PhD is a strong advantage).

- You have hands-on cleanroom experience, from e-beam or UV lithography to thin-film deposition (PVD), etches, lift-off, and process diagnostics.
- You are comfortable working with or developing superconducting circuits or cryogenic devices (experience highly valued).
- You are methodical, precise, and data-driven. You understand the importance of process control, statistical analysis, and tooling oversight.
- You thrive in collaborative, fast-paced R&D environments where experimentation is expected and rapid learning is celebrated.
- You are a great communicator and strong collaborator across design, fabrication, and measurement teams.
- 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:** Work at the forefront of quantum processor development with genuine technical ownership from day one.
- **Early-stage responsibility:** As one of our early hires, you will shape both our processes and your role. The path is open to grow into future leadership positions.
- **Collaborative environment:** Join a passionate, science-driven, and technically rigorous team, where precision and purpose go hand in hand.
- **Professional development:** Access to funding for learning, workshops, and conference attendance.
- **Competitive compensation:** Attractive salaries according to seniority, 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 brief cover letter highlighting relevant fabrication experience, and one example of how you solved a fabrication challenge (e.g., improving yield, reducing loss, or adapting a novel process) to careers@peakquantum.de.

We're an equal opportunity employer and welcome applicants from all backgrounds and identities.

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