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Senior/Staff Software Engineer (C++)

Quilter

ID: SRN2025-10175

**Senior/Staff Software Engineer (C++)**

Quilter • Full Time • Remote

(US, Canada) • • \$120k -

\$200k salary, equity

About the Company:

At Quilter, we're transforming the way electronics are designed — making hardware design as scalable and automated as software development. Our platform acts as a “compiler for circuit boards,” turning weeks or months of manual PCB layout into hours through the power of high-performance C++, machine learning, and computational geometry.

We're a deeply technical, mission-driven team backed by \$15M+ in funding, with a growing group of top-tier engineers, ML researchers, and domain experts from academia and industry. Our company is fully remote (US and Canada), and our culture is built on grit, curiosity, and the relentless pursuit of excellence.

Roles and Responsibilities:

As a Senior or Staff Software Engineer, you'll be instrumental in architecting the high-performance geometry, physics, and routing engines that form the foundation of Quilter's AI-driven PCB design automation.

You will:

- Design, implement, and optimize core geometry engines in C++ for real-time manipulation of PCB layouts.
- Build infrastructure for collision detection, meshing, geometric optimization, and path planning.
- Create performant representations of physical circuit boards to enable simulation and interaction by reinforcement learning agents.
- Collaborate closely with ML engineers and researchers to develop integrated environments that bridge physics-based simulations and AI systems.
- Lead architectural discussions and influence long-term technical strategy in a greenfield environment.
- Maintain and extend our high-performance C++ codebase within a modern, collaborative development workflow.

Job Requirements:

- 10+ years of professional C++ experience, with a track record of working in high-performance, collaborative codebases.
- Proven expertise in computational geometry, including experience with algorithms related to meshing, collision detection, or geometric optimization.
- Experience with relevant C++ libraries such as Eigen, CGAL, GEOS, or Clipper.
- Strong Python skills for system integration and ML/AI collaboration.
- Demonstrated ability to bridge academic research and production-grade systems.

- Solid fundamentals in numerical methods, geometry, and system-level performance tuning.
- Startup or fast-paced environment experience; thrives in unstructured, high-autonomy settings.
- (Bonus) Advanced degrees (M.Sc./Ph.D) or published work in computational geometry, simulation, robotics, or related fields.
- (Bonus) Backgrounds in CAD, EDA, game engines, or physics simulation.

✗ Do NOT Apply If You:

- Require visa sponsorship (H1B, TN, etc.).
- Have a history of frequent short tenures (job hopping).
- Have only worked in big corporations (Uber, Intel, etc.) without startup or high-ownership experience.
- Come from an IT consulting background (Infosys, Tata, Capgemini, Cognizant, Wipro, etc.).
- Graduated from coding bootcamps (Full Stack Academy, Hack Reactor, etc.).
- Have fake or misrepresented profiles.

Interview Process

1. Submit Profile → Quick hiring manager screen.
2. CEO Screen (45 min) → Culture and mission alignment discussion.
3. Take-Home Code Challenge → Paid (\$25) exercise to assess practical skills.
4. Hiring Manager Technical Interview → Deep dive into C++ experience and submitted work.
5. Team Interview (4 hours) → Paid (\$75), including a technical presentation and 1:1s with engineers.
6. Offer → Competitive salary + equity offer extended.