

Senior Software Engineer – C++ (Engineering Applications)

Location: St. Louis, MO (Hybrid-Remote)

Employment Type: Full-time

Eligibility: U.S. Citizen or Green Card Holder

Role Overview

We are looking for a **senior, hands-on C++ engineer** to join a small development team working on advanced engineering software. This position is best suited for someone who prefers **deep technical work over people management**, enjoys improving complex systems incrementally, and values close collaboration with a small group of experienced engineers.

This is not a managerial role. There are no direct reports and no expectation to transition into management. Success in this role comes from **technical judgment, reliability, and collaboration**, not from owning roadmaps or driving process.

Over time, this engineer will become a **trusted technical counterpart** to our senior developer—helping distribute technical load, providing thoughtful second opinions, and strengthening the long-term sustainability of the codebase.

What You Will Work On

- Maintaining, debugging, and enhancing a large, long-lived C++ codebase
- Improving performance, robustness, and test coverage in existing systems
- Implementing new features that integrate cleanly with established architecture
- Writing and maintaining automated unit and regression tests
- Investigating and resolving test failures and production issues
- Participating in code reviews and technical discussions with a small, distributed team

Most work involves **understanding existing code deeply**, not rewriting it.

Required Experience

- Strong proficiency in **C++**
 - Solid grasp of memory management, STL, and language features
 - Comfort navigating and modifying large, complex legacy codebases
- Experience debugging production software and diagnosing non-trivial defects
- Ability to work effectively in a **small, hybrid-remote team**
- Willingness to collaborate through code reviews and shared ownership

- U.S. citizenship or permanent residency

Strongly Preferred

- Windows development experience
- Visual Studio proficiency
- Experience with Azure DevOps or similar tooling
- Experience writing automated tests and debugging test failures

Helpful (But Not Required)

- C# / .NET
- VB / VBA
- FORTRAN
- QA or testing background
- CAD or 3D graphics software experience
 - Parasolid, HOOPS Visualize, MeshSim
- GUI development
 - C++ MFC and/or C# WPF

What We Value

- Engineers who prefer **depth over breadth**
- Thoughtful, respectful communication—especially in technical disagreement
- Comfort working alongside teammates with different strengths and communication styles
- Pride in making existing systems better, safer, and easier to maintain