

Senior Quantitative Developer — Research Tools & Trading Systems (US)

Company: Citadel

Role family: QD | Seniority: Senior | Location: United States (NY/Chicago/Miami vary by team)

Source (public posting): <https://www.citadel.com/careers/engineering/>

Cluster demand (ground-truth): {"QD": 0.55, "SWE": 0.3, "QR": 0.1, "DS": 0.05, "MLE": 0.0}

Reconstruction method: normalized sections + paraphrased responsibilities/qualifications for QA use.

ROLE SUMMARY

You will partner with quantitative researchers to build and maintain research tooling and trading systems. This role emphasizes engineering excellence plus enough quantitative literacy to translate research needs into reliable software.

KEY RESPONSIBILITIES

- Build research tools that support model development, evaluation, and deployment workflows.
- Implement and maintain backtesting and simulation capabilities with strong correctness guarantees.
- Develop services and data pipelines that power low-latency or high-throughput trading environments.
- Improve performance and reliability through profiling, testing, and production monitoring.
- Collaborate closely with researchers and other engineers to deliver end-to-end solutions.

REQUIRED QUALIFICATIONS

- Strong software engineering experience (Python/C++ preferred).
- Experience with performance optimization and production-grade systems.
- Ability to work with researchers to understand requirements and translate them into software.

PREFERRED QUALIFICATIONS

- Experience in systematic trading environments (market data, simulation, execution).
- Familiarity with numerical methods and statistical modeling concepts.