

Pranav Ramanathan

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February 26, 2026

Hiring Manager
Citadel Securities
London, UK

Dear Hiring Manager,

I am applying for the **Software Engineer Internship (London, 2026)** at Citadel Securities. I am completing a BSc in Mathematics at Queen Mary University of London (predicted First Class, graduating 2026) and will begin an MSc in Artificial Intelligence in 2026. Your internship's focus on building high-performing, resilient production systems in small teams is exactly the environment I want to grow in.

In my recent work, I have focused on performance, reliability, and rapid iteration. At TinyMagiq, I reduced query latency from 30 seconds to 0.5 seconds by redesigning retrieval pipelines for a multi-document AI system handling 30+ concurrent documents, and I reduced inference cost by over 95% through model and infrastructure migration while maintaining quality. At Humanize, I engineered and shipped a production AWS platform using short development cycles, CI/CD, and reliability-focused architecture across multiple deployments.

I also bring strong analytical grounding in probability, statistics, and optimization from my mathematics training and research experience. During my STRIDE internship, I benchmarked transformer and reinforcement learning methods against integer programming on combinatorial optimization tasks, built a Python reliability testing framework, and published a first-author preprint. This strengthened how I reason about trade-offs, evaluate system behavior, and communicate technical decisions clearly within collaborative teams.

I am excited by Citadel Securities' engineering culture of turning ambitious ideas into production technology quickly. I would value the opportunity to contribute to your internship program and learn from your engineers, researchers, and traders while building systems that support real-world market infrastructure.

Thank you for your time and consideration. I would welcome the opportunity to discuss my application.

Sincerely,

Pranav Ramanathan