Dear Hiring Manager,

I am writing to express my strong interest in the C++ Software Developer position at DRW. With my background in software engineering, data processing, and algorithm optimization, I believe I would be a valuable addition to your team.

DRW's reputation for leveraging sophisticated technology in diverse markets aligns perfectly with my passion for developing cutting-edge solutions. Your emphasis on autonomy and quick adaptation to capture opportunities resonates with my work style and experiences.

My recent role as an Applied Scientist Intern at Amazon AI Lab has honed my C++ and software development skills. There, I enhanced the Deep Graph Library through bug fixes and performance optimizations. One of my key achievements was implementing a reverse edge feature that boosted node classification accuracy by 16%. I also improved CSC graph neighbor sampling efficiency by 6.5% through backend PyTorch operator optimization, demonstrating my ability to work with complex systems and deliver tangible performance improvements.

This experience with high-performance computing and optimization was further reinforced during my time as a Database Research Assistant at the UW PLSE Lab. I optimized the processing of over 400 million data points using SQLite, executing more than 16,000 queries. This experience not only sharpened my skills in handling large-scale data but also in optimizing query performance – skills that I believe will be invaluable in DRW's fast-paced trading environment.

My proficiency in developing automated pipelines and infrastructure was showcased at Amazon, where I built a Docker-based release pipeline incorporating unit tests and a daily regression framework. I also integrated version update automation and AWS S3 deployment for efficient wheel distribution. These projects demonstrate my ability to create robust, scalable systems crucial for maintaining a technological edge in the financial markets.

As a Teaching Assistant for a course on functional programming and type systems, I further developed my analytical and problem-solving skills. I created autograder scripts with over 700 test cases and led infrastructure development. This experience, combined with my research on SQL table equivalences and null-value handling, illustrates my capacity to dive deep into complex problems and develop innovative solutions – a skill set that I'm eager to apply to the challenges at DRW.

Moreover, my role as a Teaching Assistant has significantly enhanced my communication skills. Co-teaching a guest lecture and coordinating grading for over 600 assignments has honed my ability to convey complex technical concepts clearly and work effectively in a team environment. I believe these soft skills are crucial in a collaborative and fast-paced setting like DRW.

I am excited about the opportunity to bring my technical expertise, problem-solving abilities, and passion for innovation to DRW. I am confident that my experience in software development, data processing, and algorithm optimization would allow me to contribute significantly to your team's success.

Thank you for considering my application. I look forward to the opportunity to discuss how I can contribute to DRW's continued success.

Sincerely,  
Stanley Yang

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