

ABHISHEK KUMAR

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Education

University of Michigan

Master of Engineering in Electrical and Computer Engineering, GPA: 4.00

Ann Arbor, MI

January 2019 - December 2019

University of Michigan

Bachelor of Science in Electrical Engineering, GPA: 3.96

Ann Arbor, MI

September 2015 - December 2018

Work Experience

Optiver

Software Engineer

Chicago, IL

February 2020 - Present

- Design and develop performant multi-exchange enhanced internal market data systems and market-aware quoting strategies to significantly improve monetization in U.S. equity options (10% increase in business line PnL).
- Lead impactful improvements to the firm's options quoting application with a software (in C/C++) and FPGA co-design to optimize quoting dynamics, ultra-low latency execution, and exchange bandwidth constraints.
- Built and deployed a data reporting pipeline to provide deep visibility into quoting behavior, enabling traders to research and refine strategies more effectively.
- Owned and coordinated cross-functional efforts (trading, operations, and development teams) to successfully onboard trading on a new East Coast options exchange.
- Implemented exchange connectivity and built relationships with exchange contacts to successfully advocate for execution protocol changes to accommodate firm needs.
- Improved firm's success rate in U.S. auctions across multiple exchange venues through strategy and system enhancements.
- Manage and oversee 2 direct reports: on-boarding them into a high-performance group, assigning and overseeing projects, ensuring successful delivery, supporting their professional growth through regular 1:1s and feedback.
- Provide technical mentorship to team members in Automated Trading Systems Team as a senior engineer; help set direction, establish best practices, and guide the vision of the team toward long-term success.
- Conduct regular technical interviews and mentored interns, contributing to hiring top talent.

Apple Inc.

Software Engineering Intern

Cupertino, CA

May 2019 - August 2019

- Feature exploration using a CPU simulator (in C++) on fetch stage CPU micro-architecture optimization to improve performance.
- Gathered data on characteristics of the feature, proposed and simulated designs for an implementable feature and obtained performance metrics across a variety of real workload traces.
- Demonstrated significant performance upside on branch executions. The feature was patented and implemented on next-generation CPUs.

Qualcomm Technologies Inc.

Hardware Engineering Intern

San Diego, CA

May 2018 - August 2018

- Power states/sequences in SoC require support for multiple subsystems across numerous teams.
- Implemented a platform-independent, standardized infrastructure in python capable of phased deliveries, custom driver code generation, and robust automation to ensure accuracy/ease of use.
- Platform is used by DV/SW/SVE teams to generate driver code from a singular consistent source.

University of Michigan, EECS Department

Research Assistant

Ann Arbor, MI

May 2017 - July 2017

- Researched improving solar panel efficiency by integrating bypass diodes into solar cell structure.
- Simulated functionality and developed a prototype design to demonstrate feasibility.

Skills

Languages/Frameworks: C/C++, Python, Git, Linux Bash, Jenkins CI/CD, S3 AWS, Kafka, Apache Spark

Interests: Hiking, Tabla, Films, Pickleball