

NATHAN KUBCZAK

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<https://nathankubczak.gatsbyjs.io>

EDUCATION

University of Michigan

B.S.E Computer Science *GPA: 3.9 / 4.0*

Ann Arbor, MI

September 2019 - December 2022

Relevant Coursework: Operating Systems, Distributed Systems, Web Systems

EXPERIENCE

IMC Trading

Chicago, IL

Software Engineer Intern

June 2022 - August 2022

- Developed optimizations to lower the latency of order generation for hypothetical options valuations. System uses Java and C++.
- Discovered bottlenecks in system through profiling with YourKit and Magic Trace.
- Optimizations involved the creation and development of a caching mechanism that cached order books which were more likely to contain profitable opportunities.
- Analysis on optimizations showed about a 30% decrease in the latency for order generation events.

JP Morgan Chase & Co.

Columbus, OH

Software Engineer Intern

June 2021 - August 2021

- Implemented dashboards for several databases across the Consumer and Community Banking division. Created dashboards using SQL, Grafana, and Splunk.
- Changed logging for databases involved with document processing jobs to log more information on job statuses and produce clearer error messages on failures. Data sources included Microsoft SQL Server, Oracle Database, and IBM DB2.
- Improved response time using dashboard alerts for document processing backlogs and failures on client-side applications.

EECS 370

Ann Arbor, MI

Teaching Assistant

September 2021 - Present

- Held weekly discussions going over practice problems and conceptual course content for around 20 students. Also held office hours for project and homework help.
- Co-authored homeworks and exams for course.
- Course covers basics of how a computer works, including assembly code, pipeline processor design, caches, and virtual memory. Course has around 800 students enrolled each semester.

Michigan Quantitative Investment Society

Ann Arbor, MI

Executive Board Member

January 2021 - Present

- Developed an execution system used for paper trading various algorithmic trading strategies within the club.
- Execution system build using C++, Python, and PostgreSQL.
- Led recruitment for club. Recruitment tasks included conducting informal interviews with prospective members and reviewing resumes.

PROJECTS

Code for Good Hackathon *Node.js, SQLite, Charts.js*

- Worked in a team of five to build an add-on for the nonprofit Ohio Humanities website.
- Add-on includes a live chat, user reactions for messages, and charts displaying reaction data.

Spotify Recycle Bin *Flask, Python*

- Designed a Flask application using the Spotipy library for the Spotify Web API.
- App implements a recycle bin for when a user removes a track from one of his or her playlists.

SKILLS

Programming Languages: C++, C, Python, Go, Java, HTML/CSS, SQL, Javascript, Matlab
Technologies / Frameworks: JavaFX, Django, Flask, React, Spring, Node, Git, Linux