Ian Dougherty

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SOFTWARE ENGINEER

21-year-old CS masters student with a keen interest in building scalable and intelligent systems. Research interests include heterogeneous computing & hardware simulation. Held former internships developing technical infrastructure for financial firms in Chicago. Always learning more and fostering curiosity through a variety of personal projects.

EDUCATION

Illinois Institute of Technology, August 2020 - May 2024
- M.S. Computer Science, 4.0 GPA
- B.S. Computer Science, 3.93 GPA

PROFESSIONAL EXPERIENCE

Software Engineering Intern, Group One Trading LP   **May 2023 - August 2023**
- Worked in C# on a variety of production services, identified areas to improve existing systems.
- Implemented efficient components to process, cache, and merge streams of data.
- Built a full stack application to monitor codebase and display dependency data for all projects.
- Found and integrated new data source while the existing production stream went offline.

Graduate Research Assistant, College of Computing IIT   **January 2023 - May 2023**
- Studied programming frameworks for heterogeneous systems and their capacity for simulation.
- Investigated the efficacy of parallel discrete event simulation for small heterogeneous clusters.
- Gave weekly technical presentations on findings, progress, and new directions.

Software Engineering Intern, The Chicago Mercantile Exchange   **May 2022 - November 2022**
- Developed multiple flexible APIs to deliver data on application monitoring and secret usage.
- Placed 2nd in an algorithmic trading hackathon on a team of 7 developers.
- Extended internship through the fall to aid in CME Group's migration to Google Cloud Platform.
- Created pilot projects to aid in technical decisions for building new deployment infrastructure with GKE.

Full Stack Web Developer, Receptify   **January 2022 - August 2022**
- Worked on a small dev team for a university startup that aimed to improve access to Title IX resources.
- Implemented basic chat, authentication, and CMS functionality using MERN stack.

KEY COMPETENCIES

Independent learning
Technical communication
Design patterns

TECHNICAL SKILLS

C#	Cuda	GCP / GKE	Parallel Programming
Java	SQL	Kubernetes	Performance Optimization
C / C++	Bash	Docker	Networking

PERSONAL PROJECTS

Daily Putt: Procedurally generated daily golf game   **Crossword:** Generated using C++ & WebAssembly
Physics Engine: 2D rigid body physics simulator   **Ray Tracer:** Sphere renderer with lighting in C#
JS-Kart: Real time multiplayer car racing game   **Browser 3D Engine:** 3D renderer in pure JavaScript