

Abdifatah Abdi

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EDUCATION

University of Minnesota – Twin Cities

Bachelor of Arts in Mathematics and Computer Science

Minneapolis, MN

Expected Graduation: May 2025

Normandale Community College

Associate of Arts in Mathematics

Minneapolis, MN

Conferred May 2022

Relevant Coursework: Mathematics of Data Science and Machine Learning, Introduction to Computing and Programming, Multivariable Calculus, Linear Algebra and Differential Equations, Cryptology and Number Theory, Machine Architecture and Organization, Algorithms and Data Structures, Operating Systems, Theory of Statistics

TECHNICAL SKILLS

Python | Java | SQL | C | C++ | JavaScript | Django | React | Node.js | Express.js | OCaml | NumPy | CSS | HTML 5

EXPERIENCE

University of Minnesota – Twin Cities

Computer Science Teaching Assistant

Minneapolis, MN

Jan 2024 – Current

- Guide students through complex concepts in Java, focusing on algorithm efficiency and data structure implementation
- Assist students in completing Java programming assignments, providing insights into coding best practices, and debugging techniques
- Hold regular office hours to provide individualized support and guidance, aiding students in grasping challenging concepts and problem-solving techniques

AfterFlea OS Conversational AI Backend Engineer Intern

Remote

Sep 2023 – Nov 2023

- Developed and implemented a real-time chat translation feature in a React-based chat application using Google Translate API, enhancing the application's global user accessibility
- Utilized Firebase for data storage, authentication, and real-time synchronization, ensuring efficient and secure messaging within the application
- Optimized the chat application's performance and responsiveness, improving user satisfaction and productivity

PROJECTS

Gradebook Management System in C

Jun 2023

- Implemented C-based Gradebook Program with hash table data structure for efficient storage of student scores, supporting command-line interface for adding, searching, printing, reading/writing to/from text and binary files, adhering to specific file formats for smooth operation

Concurrent Image Rotation Server (CIRS) in C

Dec 2023

- Developed a multi-threaded server in C using socket programming for reliable TCP connections, capable of handling concurrent image rotation tasks across multiple client connections, while also enabling clients to establish connections, send requests, and save processed images to specified directories

Efficient File Deduplicator

Oct 2023

- Implemented an Efficient File Deduplicator system using C, which utilized advanced process tree creation with fork(), exec(), and wait() operations, alongside pipe-based inter-process communication to identify and eliminate duplicate files in a file system hierarchy, replacing them with symbolic links to optimize storage efficiency

LEADERSHIP EXPERIENCE

Muslim Student Association (MSA)

MSA Team Lead (social media)

Bloomington, MN

Jan 2022 – May 2022

- Recorded MSA events and lectures
- Worked and communicated with others to set up events for club members
- Promoted club on social media and increased the members count from 5 to 50+