

Parker Mathena

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EDUCATION

University of Michigan

Ann Arbor, MI

Bachelor of Science Engineering in Computer Science

April 2024

- Relevant Courses: Discrete Mathematics, Data Structures and Algorithms, Linear Algebra, Computer Organization, Computer Security, Web Systems, Operating Systems, Software Engineering, Video Game Development, Information Retrieval and Web Search

WORK EXPERIENCE

Rocket Mortgage

Detroit, MI

Software Engineer Intern

May 2023 - August 2023

- Created and configured an AWS user and role to be used with an internal API. Updated the API to send daily emails with a presigned URL to download a report from an AWS S3 bucket
- Designed and implemented 'Hackweek' project that converted Excel data dictionaries to JSON files for a web app data dictionary platform
- Created unit tests for a new API feature that identified a calculation bug. Quickly identified and implemented a solution
- Learned C#, .NET, and AWS through assigned tasks and trainings

University of Michigan

Ann Arbor, MI

Instructional Assistant for Programming and Intro Data Structures

August 2022 - May 2024

- Assisting in instruction of 1000+ students by holding office hours, writing and evaluating exams, teaching a lab section, and answering questions in lecture and a Q&A forum

PROJECT EXPERIENCE

Kai: Lost Waters

Ann Arbor, MI

Co-creator

March 2024 - April 2024

- Showcase winning 2D puzzle game which lets the player control water with realistic physics
- Assisted in design and implementation of 2 major levels along with 20+ puzzles, 20 minutes of gameplay
- Created a dynamic title screen and dynamic credits scene
- Built in Unity with C#, used Jira for project management software

Michigan Hackers iOS Subteam

Ann Arbor, MI

Co-lead

January 2024 - May 2024

- Organize and run weekly hack-nights working on a mobile course recommendation application for UofM

Network File Server

Ann Arbor, MI

Co-creator

March 2023

- Implemented a multi-threaded network file server in C++ with fine-grained locking, included hierarchical file systems, socket programming, client-server systems, and network protocols

Search Engine

Ann Arbor, MI

Co-creator

March 2023

- Scalable search engine running on multiple servers. Search index servers use a Map Reduce pipeline to create an inverted index of results. Built using Python, Flask, Jinja, REST API

SKILLS & INTERESTS

Skills: C++ | Python | C# | Unity | JavaScript | MATLAB | Jira