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# JACKSON HOGGARD

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## EMPLOYMENT

**Software Engineer** **Divine Gaming Inc.** **June 2022 - April 2023**

- Collaborated as a team member in the development of a comprehensive video game within the Minecraft environment
- Reduced computational overhead by utilizing pathfinding algorithms to optimize non-player character movement
- Diminished resource consumption 25% by introducing asynchronous loading using multithreading and parallel processing, allowing for background loading of resources while maintaining smooth gameplay
- Participated in regular team meetings to discuss progress, plan development sprints, and address design considerations

## EDUCATION

**Richardson, TX** **University of Texas at Dallas** **August 2021 - May 2025**

- BS in Computer Science, May 2025. GPA: 3.5
- Relevant Coursework: Operating Systems; Data Structures & Algorithms; Computer Architecture; Software Engineering; Programming Language Paradigms; Computer Networks; C/C++ Programming in a UNIX Environment

## PROJECTS

**Dreamboard** **ACM Projects** **Sep 2021 - Dec 2022**

*Web application that finds furniture that matches a color palette* JavaScript | Node.js | React | Express | MongoDB | Git

- Built web scraping tools for five unique furniture sites to produce a database of products
- Implemented robust color matching algorithms to filter a large database of furniture items
- Facilitated weekly discussions with back-end team to assess project expectations and constructed database schemas
- Collaborated with front-end team to align project objectives
- Directed database design and implementation of request methods to allow for seamless integration with the frontend

**Voodoo 2D**

*Lightweight Java library for building complex cross-platform 2D games* Java | Maven | OpenGL | Travis CI | Git

- Architected a Java library to supply game developers with a tool to construct 2-dimensional cross-platform games that employ OpenGL technology
- Leveraged Metrics Reloaded IntelliJ plugin to identify performance bottlenecks and implemented batched rendering process to improve program efficiency during runtime
- Managed assignments and monitored open-source contributions to ensure fulfillment of project goals

**Multithreaded Database Server**

*A custom multithreaded database server written in C to manage data storage and retrieval* C | Vim | Git

- Implemented a client-server architecture allowing communication between the client and server components
- Designed and implemented robust message-passing protocols for transmitting data between the client and server processes
- Utilized socket programming techniques to establish and maintain connections between the client and server
- Applied multithreading to the server process to allow for the handling of multiple client connections simultaneously

## AWARDS

**Eagle Scout |** Achieved the highest rank in the Boy Scouts of America, demonstrating leadership, initiative, and dedication through the completion of an extensive community service project

**Dean's List |** Maintained a GPA in the top 10% of students in the school of computer science and engineering

## TECHNICAL SKILLS

**Languages |** Java, Python, C/C++, SQL, JavaScript, HTML/CSS

**Frameworks** | React, NodeJS, Express, JUnit