Richardson, TX 75080
jacksonhoggard.me
github.com/JacksonHoggard

JACKSON HOGGARD

(512) 971-7187
jhoggard0129@gmail.com
linkedin.com/in/jackhoggard

EMPLOYMENT

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

- Collaborated as a team member in the development of a comprehensive video game
- 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; Advanced Data Structures & Algorithms; Computer Architecture; Software Engineering; Computer Graphics; 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

RayDream

Ray-tracing rendering engine that creates realistic computer generated imagery written in Java Java | Git

- Developed a raytracing engine from scratch using Java, implementing algorithms for ray-object intersection, shading, and global illumination
- Implemented various rendering techniques including reflection, refraction, and shadowing to create realistic scenes
- Optimized raytracing performance through acceleration structures such as bounding volume hierarchies (BVH) and kd-trees, resulting in 50% reduction in render times

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