

Emmett Kapsner

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EDUCATION

University of Minnesota, College of Science and Engineering

Minneapolis, MN

Bachelor of Science, Computer Science

German Minor

May 2024

GPA: 3.6

SKILLS

Technical Skills: C, C++, GLSL, JavaScript, HTML, CSS, SQL, and Microsoft Office

Language: Proficiency in German

PROJECTS

Ruby on Rails Website/Database

January 2025

- Designed and implemented a Ruby on Rails website with access to a PostgreSQL database to categorize and display work orders
- Optimized the HTML layout to ensure easy readability and access to information
- Utilized JavaScript functionality to implement a simple and intuitive user interface

Ray Tracer

January 2023 – December 2024

- Developed a ray tracer from scratch in C, implementing advanced rendering techniques without relying on external libraries
- Implemented a variation of the Blinn-Phong reflection model to simulate realistic lighting effects, including specular highlights and diffuse shading

VR Spellcasting Input System

November 2023 – December 2023

- Enables user to enter commands by intuitively drawing shapes in 3D space using the Godot engine
- Uses particle systems to provide immediate feedback to user

2D Rigid Body Simulation

November 2023 – December 2023

- Created a 2D rigid body simulation system from scratch using Processing, incorporating rotational dynamics and collision detection
- Implemented the Separating Axis Theorem (SAT) to accurately detect collisions between convex shapes, enabling realistic interactions between objects

WORK EXPERIENCE

Loyola Spirituality Center

Saint Paul, MN

IT Contractor

December 2024 – Present

- Streamline operations by automating workflows, enhancing productivity and efficiency
- Manage and analyze large datasets using spreadsheets and custom JavaScript solutions
- Provide technical support for virtual meetings, ensuring minimal disruptions and a smooth experience
- Train staff on software tools and best practices to improve technical proficiency
- Maintain and update IT systems to support organizational goals and improve performance

University of Minnesota, Office of Classroom Management

Minneapolis, MN

Classroom Technology Monitor Lead

September 2022 – November 2024

- Tested and serviced complex technical systems to minimize downtime
- Coordinated tasks with coworkers to ensure timely resolution of mechanical/technical issues
- Organized and maintained departmental inventory to allow for system upgrades and repairs
- Trained and explained the essential technical nuances to new team members
- Suggested and implemented changes in classroom system layout to improve user experience