

# Luke Broglio

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## EDUCATION

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**Iowa State University** -- Ames, IA

**Graduated: May 2025**

Bachelor of Science in Software Engineering -- GPA 3.6

- Minor in Cybersecurity

## RELEVANT SKILLS

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C, C++, C#, Java, Python, HTML/CSS, JavaScript., Atlassian products, JFrog Artifactory and Xray, Gradle, Git, and Agile Development.

## WORK EXPERIENCE

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**Federated Mutual Insurance Company**

Owatonna, MN

Associate Systems Developer

June 2025 - Present

- Learned to apply development skills I learned in college to a corporate and enterprise setting as a part of the talent development program.

**National Information Solutions Cooperative**

Cedar Rapids, IA

Software Development Intern

May 2024 – August 2024

Software Development Intern

Part-time (Remote) August 2023 – May 2024

Software Development Intern

May 2023 – August 2023

- Collaborated with the Security Operations team to improve the security of applications.
- Coordinated between Version Control, CI/CD, and Software Composition Analysis software to track and remediate Common Vulnerabilities and Exposures.
- Presented solutions I worked on to other developers in a large group setting.

**Iowa State University**

Ames, IA

Teaching Assistant (TA)

September 2024 - December 2024

Teaching Assistant (TA)

December 2022 - May 2023

- Assisted in teaching *Introduction to Computer Graphics* and *Brief Introduction to Computer Programming* courses.
- Graded assignments and provided feedback to students both in person and online.

## PROJECTS

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**Hybrid 3D Gaussian Splatting Raytracer (C# and Shaderlab)** September 2024 – May 2025

- Developed a rendering pipeline to create splats and render them alongside polygon models using a raytracer.
- Implemented bounding volume hierarchy acceleration structures for both polygon models and Gaussian Splats.
- Utilized academic papers to design and implement ray-gaussian intersection and spherical harmonics for color.

**Message Aggregator App (Java, Springboot, MySQL)** August 2023 - December 2023

- Develop an app to gather messages and emails from different platforms into a single place.
- Utilized a Rest architecture to communicate between Springboot and Android applications.
- Worked with a team over the course of several months to create the project

**Raytracing Graphics Renderer (C++)** November 2023 - December 2023

- Wrote a program which used raytracing to render 3D models included in .obj and .mtl files.
- Dynamically found shadows and reflections based on ray bounces.

## ACTIVITIES AND LEADERSHIP

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**Emerging Leaders in Engineering, President** | August 2021 – May 2025

**Engineering Leaders of Tomorrow, Programming Chair** | March 2023 - October 2024