





DUONG HOANG VU

 github.com/Glyochi

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My goal is to be able to work on new interesting and challenging problems. I am looking for internships that allow me to gain experience and grow as a future computer scientist.

EDUCATION

Iowa State University of Liberal Arts and Sciences (Ames, IA)

Expected Graduation: May 2023

Bachelor of Science in Computer Science

Major GPA: **3.94**/4.0

Honors: Dean's List (4 Semesters)

Cumulative GPA: **3.8**/4.0

Skills: · Java, Python, C, C++, OpenGL, OpenCV, JavaScript, Spring Boot, Android Studio, Git

PERSONAL PROJECTS

Facial Detection (Python + OpenCV)

Ames, IA

June 2021 – August 2021

- Refined OpenCV haar-cascade to detect tilted faces in real-time.
- Improved hit rate for haar-cascade through stitching detected faces from images of different orientations.
- Engineered solutions to help alleviate workload on the CPU without sacrificing increased accuracy.
- Incorporated multithreading elements to reduce frametime. I was able to detect tilted faces accurately on 30fps videos with the default haar-cascade classifier.

Tetris Web Application (JavaScript)

Ames, IA

July 2020 – August 2020

- Created a Tetris web app with gameplay as close as possible to Tetris 99.
- Designed and implemented the game engine to simulate Tetris 99 physics, as well as the render engine to display graphics glitch-free for all window sizes.
- Implemented the sound player that can grab music files from the server and play on command.

OTHER PROJECTS

Raytracer (C++)

Ames, IA

August 2021 – November 2021

- Designed the classes for the Raytracer using Object Oriented Programming design principles.
- Implemented basic anti-aliasing to reduce noises and improve images' quality.
- Implemented multithreading to render multiple rays at once, increasing the overall Raytracer's performance.

Maze Solving Robot (Java)

Ames, IA

November 2020

- Designed the classes for the robot using Object Oriented Programming design principles.
- Implemented A* and Dijkstra algorithms used in finding the shortest path.

LEADERSHIP EXPERIENCE

Computer Science Help Room

Ames, IA

Tutor

August 2021 – Present

- Assisted students with comprehending materials from all 300-level Computer Science courses.
- Narrowed down students' problems with the curriculum.
- Taught students the problem-solving skills needed for succeeding in their courses.

ComS 319 Web app (React)

Ames, IA

Project Leader

August 2020 – November 2020

- Planned milestones and distributed workload among team members.
- Implemented a graphing visualizer into our web app and added additional functions.
- Assisted team members with integrating their works into the web application.