




DUONG HOANG VU

 github.com/Glyochi ·  [Glyochi.com](https://glyochi.com)

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EDUCATION

Iowa State University (Ames, IA)

Bachelor of Science in Computer Science

Expected Graduation: December 2022

Major GPA: 3.7/4.0

Honors: *Dean's List (4 Semesters)*

Cumulative GPA: 3.65/4.0

Skills: *ReactJS, Spring Boot, Flask, NodeJS, Android Studio*

Languages: *Java, JavaScript, Python, C, C++*

Coursework: *Design and Analysis of Algorithms, Software Development Practices, Construction of User Interfaces*

PROJECTS

Facial Detection Live Streaming Web App

December 2021 – January 2022

Personal Project (On Glyochi.com)

Ames, IA

- Ported my facial detection project below onto the web by using *ReactJS* for the frontend and *Flask* for the backend
- Increased video playback smoothness and minimized jittering by 10% by displaying frames at appropriate time
- Reduced facial detection time in the server by 50% by handling resizing and gray scaling the image in the frontend
- Decreased server's response size by 95% by only sending the faces' coordinates and rendering them on the frontend

Golfer Social Media App

August 2021 – November 2021

Com S 309 Project (On Github.com/Glyochi)

Ames, IA

- Developed an android app using *Android Studio* for the UI, *Spring Boot* for the server, and *MySQL* for the database
- Structured the frontend and backend using the *MVC-Service* design pattern for easier maintenance and scalability
- Designed the *REST API* and business logic to provide all the functionalities the app needs
- Implemented a real-time public chat room for the app users using *WebSocket*
- Used *CI/CD* to automatically build, run *Mockito* tests, and deploy the server

Ray tracer

August 2021 – November 2021

Com S 336 Project (On Github.com/Glyochi)

Ames, IA

- Created from scratch a ray tracing engine that can generate realistic images using *C++*
- Improved images' quality and reduced noises by implementing anti-aliasing
- Increased color accuracy by implementing ray's bouncing property and materials' reflective properties

Tilted Facial Detection

June 2021 – August 2021

Personal Project ~ Python (On Github.com/Glyochi)

Ames, IA

- Refined OpenCV haar-cascade to better detect tilted faces by 30% by doing selective scans in different orientations
- Alleviated workload on the CPU and increased performance by 100% by incorporating multithreading into the program
- Designed and implemented custom debugging tools to help fix bugs and boost development speed

Tetris Web Application

July 2020 – August 2020

Personal Project (On Glyochi.com)

Ames, IA

- Created a Tetris web app with gameplay as close as possible to Tetris 99 using *JavaScript*
- Designed and implemented the game engine to simulate Tetris 99 physics and sound effects
- Reduced web browser's workload by engineering a graphic engine that only re-renders parts that are necessary

LEADERSHIP

Computer Science Help Room

August 2021 – Present

Tutor

Ames, IA

- Assisted students with comprehending all core Computer Science courses by identifying their knowledge gaps
- Guided students by reminding them of concepts taught in class or giving them examples of similar problems
- Taught students the problem-solving skills required for them to succeed in their courses

VISA Club

August 2019 – Present

Event Organizer

Ames, IA

- Reached out to new incoming international Vietnamese students to recruit them for the club
- Planned and organized gatherings on special occasions for club members to participate
- Supported club president with managing club's budget