DUONG HOANG VU

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EDUCATION

Iowa State University   *Expected Graduation: Spring 2023*
   Bachelor of Science in Computer Science   *Major GPA: **3.68**/4.0*
Honors: *Dean's List (4 Semesters)*   *Cumulative GPA: **3.58**/4.0*
Skills: *ReactJS, .NET Core, Spring Boot, Flask, NodeJS, Google Cloud Run*   **Languages**: *Java, C#, JavaScript, Python, C, C++*
Coursework: *Design and Analysis of Algorithms, Principles of Artificial Intelligence, Introduction to Machine Learning*

EXPERIENCE

Software Engineer Intern *(Summer and Fall)*   *May 2022 – December 2022*
   Environmental Health and Safety - ISU (EH&S)   *Ames, IA*
o Developed and maintained 6+ .NET Core web applications with Agile methodology (Jira, BitBucket, Visual Studio)
o Redesigned 2+ applications using SOLID principle and MediatR to improve maintainability, all have gone into production
o Designed the UI using JS/JQuery, HTML, CSS and integrated Syncfusion components to reduce development time by 20%
o Utilized Factory and Dependency Injection design patterns, and Entity Framework and LINQ for backends

Facial Detection Live Streaming Web App   *December 2021 – January 2022*
   Personal Project (On Glyochi.com ~ Deployed with Cloud Run)   *Ames, IA*
o Ported my facial detection project below onto the web by using ReactJS for the frontend and Flask for the backend
o Increased video playback smoothness and minimized jittering by 10% by displaying frames at the appropriate time
o Reduced facial detection time in the server by 50% by handling resizing and gray scaling the image in the frontend
o Decreased server's response size by 95% by shifting the custom frame rendering task to the browser

Golfer Social Media App   *August 2021 – November 2021*
   Com S 309 Project (On Github.com/Glyochi)   *Ames, IA*
o Developed an android app using Android Studio for the UI, Spring Boot for the server, and MySQL for the database
o Structured the frontend and backend using the MVC-Service design pattern for better maintainability and scalability
o Designed the REST API and business logic to provide all the functionalities the app needs
o Implemented a real-time public chat room for the app users using WebSocket
o Used CI/CD to automatically build, run Mockito tests, and deploy the server

Tilted Facial Detection (Computer Vision)   *June 2021 – August 2021*
   Personal Project ~ Python (On Glyochi.com and Github.com/Glyochi)   *Ames, IA*
o Refined OpenCV haar-cascade to better detect tilted faces by 30% by doing selective scans in different orientations
o Alleviated workload on the CPU and increased performance by 100% by incorporating multithreading into the program
o 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*
o Created a Tetris web app with gameplay as close as possible to Tetris 99 using JavaScript
o Designed and implemented the game engine to simulate Tetris 99 physics and sound effects
o Reduced web browser's workload by engineering a graphic engine that only re-renders parts that are necessary

ACTIVITIES

Undergraduate Teaching Assistant   *February 2022 – May 2022*
   Computer Science 309   *Ames, IA*
o Automated google doc and sheet file generation from data in CSV files using Apps Script
o Migrated 200+ student projects from one GitLab server to another automatically using bash script

Computer Science Tutor   *August 2021 – May 2022*
   Computer Science Help Room   *Ames, IA*
o Assisted students with comprehending all 300-level Computer Science courses by identifying their knowledge gaps
o Guided students by reminding them of concepts taught in class or giving them examples of similar problems