Dongha Cho

donghatamu@tamu.edu | (979) 255 9134

EDUCATION

Texas A&M University - College Station **Expected: May 2025**

BS, Computer Science *College Station, TX*

3.285/4.0 GPA

- **Relevant Courses:**
  Data Structures and Algorithms, Artificial Intelligence, Computer Graphics**,** Foundations of Software Engineering, Design and Analysis of Algorithms, and Computer Organization
- Completed a study abroad program in Greece during summer 2023 (Texas A&M University Faculty-Led).

EXPERIENCE

SAE/GM Autodrive Challenge II **Aug. 2023 – Dec. 2023**

Computer Vision + LiDAR Processing Sub-team Member *College Station, TX*

- Collaborating as a member of the Texas A&M University team working to transform a Chevrolet Bolt into a Level 4 Autonomous Vehicle.
- Enhanced the vehicle's perception capabilities by training the YOLO v8 algorithm on custom datasets with over 6000 traffic light images, achieving identification of different traffic light states (green, yellow, red, and arrows).
- Developed and implemented a Python script utilizing OpenCV to effectively test the trained YOLO v8 algorithms with video datasets from the University of Michigan's Mcity Test Facility, ensuring the algorithms' consistent performance in Autodrive Challenge scenarios.
- Worked on developing a decision-making algorithm to determine the vehicle's course of action upon detecting a yellow light, assessing whether to pass through or come to a stop based on various parameters.

PROJECTS

Interactive 3D Robot Simulation | C++, OpenGL **Aug. 2023 – Sep. 2023**

- Designed a 3D robot model with 10 interconnected components, rendering them using the recursive Depth-First Search(DFS) algorithm.
- Developed functionalities f or manual manipulation of robot components, enabling rotations and adjustments via keyboard commands.
- Implemented a dynamic animation that transitions the robot model into a running motion.
- Utilized C++ and OpenGL's graphics capabilities to design and optimize the visual aspects of the simulation, demonstrating a hands-on approach to graphics programming.

Chrome Dino Game Remake | C++, SFML **Jun. 2023 – Aug. 2023**

- Remade the iconic Chrome Dino Game, introducing a novel functionality that enables the T-Rex to emit fireballs, adding a new strategic dimension to the gameplay.
- Utilized C++ and SFML, applying object-oriented programming principles to implement game mechanics and features.

SKILLS

Languages: C++, Python | **Frameworks/APIs/Libraries:** OpenCV, OpenGL | **Tools:** Docker