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EDUCATION

Tsinghua University   **Beijing, China**
Software Engineering, School of Software   2022.09 – 2026.06

- GPA: 3.698 / 4.000, 40%;

RESEARCH EXPERIENCE

Multi-Robot Social Navigation with Cooperative Occupancy Prediction   **2024.06-2024.10**
Research intern, Group Leader   *U. C. Riverside, USA*

Directed by Prof. Jiachen Li. In this project, I introduced a novel multi-robot social navigation system that integrates cooperative perception from autonomous driving into multi-agent reinforcement learning framework. I had the opportunity to lead a small research group. The paper was submitted to ICRA but is currently undergoing peer review.

3D human body reconstruction based on inverse rendering   **2023.08-2024.05**
Research intern   *Tsinghua Univ., China*

This project is co-supervised by Prof. Feng Xu and Wenbin Lin, focusing on the reconstruction of real-time human body movements, mesh and lighting textures from a sparse perspective. We used a small number of camera as input, to estimate the posture of the human and render it into mesh model in real time. The paper is currently under review.

Quality of Experience(QoE) Improvement in Mobile Live Streaming Program   **2023.03-2023.07**
Research intern   *Tsinghua Univ, China*

In this project, I extensively searched and read relevant publications, and attempted to implement a method for evaluating video streaming hotspots through C++, fanally applied to the adaptive bitrate system in our laboratory.

PROJECT EXPERIENCE

Multi-modal AI assistant based on Django and LocalAI   **2023.09**
Group Leader   *Tsinghua University, China*

In this project, I led the development of a multi-modal AI assistant that seamlessly integrates language, image, and speech processing capabilities using **LocalAI**. The assistant providing a cohesive user experience through a **Gradio** interface. This endeavor provided me with leadership experience and LLM app developing experience for the first time.

MediPlot, a medical data visualization software based on Qt   **2023.09**
Individual developer   *Tsinghua University, China*

Mediplot is a medical data visualization software developed based on Qt and Eigen. This program provides functions for data analysis such as data import, chart drawing, and cluster analysis. I **developed GUI interfaces** and gained an understanding of modern **programming design pattern** and **coding standards.**

Clightbot, a C++ Program Design Class Homework   **2022.12**
Group Leader   *Tsinghua University, China*

In this project I implemented a puzzle game similar to the well-known game "Lightbot" through command operations and image file reading and writing. Through this project, I have improved my **C++ programming skills** and the ability to lead a team in **collaborative project development.**

SKILLS & COURSES LEARNED

Courses Learned

- **School Courses**: C++ (4.0/4.0), OOP (4.0/4.0), Data Structure(4.0/4.0), Stochastic Process (4.0/4.0), Graph Theory (4.0/4.0), Modern OS(4.0/4.0), Web(4.0/4.0), Machine Learning, Software Engineering
- **Online Courses**: Graphics (GAMES101), Intro. to A.I. (UCB CS188), Deep Learning (CS231n), Deep RL(UCB CS285), Imitation Learning.

Programming Skills

- **C++** (Qt, Eigen), **Python** (Pytorch, OpenCV, Gym, Django), **Web** (React, JS/HTML/CSS).
- **Others**: LaTex, Unity, Blender…

Language

- **English:** TOEFL(89), CET6(585)