Bao-Hsuan Huang

M.S. in Computer Science, National Tsing Hua University

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Education

National Tsing Hua University *Hsinchu City, Taiwan*
M.S. in Computer Science Sept. 2022 – Jun. 2024

National Tsing Hua University *Hsinchu City, Taiwan*
B.S. in Computer Science Sept. 2018 – Jun. 2022

Keio University *Tokyo, Japan*
Exchange Student in Dept. of Science and Technology Oct. 2023 – Feb. 2024

Skills

Programming (Proficient) C/C++, Python (Familiar) HTML, CSS, JavaScript

Languages Mandarin, English

Master's Thesis Research

Non-invasive Classification of Alzheimer's Disease using Gait and Facial Features

Sept. 2022– now

Proposed a framework for classifying Alzheimer's Disease using gait and facial features extracted from the video data.

- Four Subtasks: Walking, Sit down and Stand up, Turning, Facial
- Data processing, Model training and evaluating, Model explanation, Subtask analysis

School Projects

Real-time Video Conference System with Machine Learning Methods

Feb. 2021– Feb. 2022

Present a video conference web system with multiple functions between two users.

- Conference image – Instance segmentation, Super resolution
- Conference sound – Speech to Text, Speech Denoising
- Backend data processing – Node.js, Http packet request, WebRTC
- Front-end web design

Online Chatroom with Firebase

March 2020

Present a web-based chatting system with Firebase, Responsive Web Design, and key functionalities. Demo video can be found here.

- User Sign in/Sign up/Log out system
- Allow to send both text and image
- Private chatroom (one-on-one) and public(group) chatting space
- Web animation design
- Utilized: C++, TypeScript

Game Design with Cocos Creator and Firebase

June 2020

Present a strategy game with Cocos Creator, linked with Firebase, and key game functionalities. Demo video can be found here.

- User Sign in/Sign up/Log out system
- Strategy for earning in-game currency and combating enemies
- Interact with players through mouse input
- Dynamic day and night scenes for an immersive experience
- Utilized: C++, TypeScript

Toy Box: Hardware Design with FPGA

January 2020

Designed and handmade an interactive toy box which controlled with FPGA board.

- Control stepper motors' rotational speed and direction of rotation
- Toggle the switch to start the game by sending a signal to the board
- Utilized: Verilog