

Yu-Ching Hsu

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SKILLS

Python C JavaScript Java PHP TypeScript
Node.js Angular Git AWS EC2 MFC D3
MySQL HTML CSS TensorFlow PyTorch

EXPERIENCE

Logitech Inc.

July 2018 – Sep 2018 🌐

Software Engineer Intern

C C++ MFC

- Developed a real-time data visualization platform to accelerate the development process for image quality tuning with MVC pattern.
- Extended compatibility of the platform to any Logitech camera by designing a byte-mapping configuration mechanism in firmware.
- Converted MATLAB code into Python and performed unit tests to verify the both versions.
- Developed a human face detection algorithm to improve the auto focus.

EDUCATION

University of Utah

2019 – May 2021

MS, Computer Science

GPA:3.74/4.0

- Algorithms, Data Structure, Operating System
- Deep Learning, Computer Vision, Nature Language Processing

Yuan Ze University

2018 – 2019

MS, Electrical Engineering

GPA:4.0/4.0

- Thesis: Automatic Elevator Button Recognition with CNN Feedback System Enhancement
- IMECS 2018: Button Segmentation from an Elevator Inside Door Image
- IMECS 2019: Effective and efficient baseline correction algorithm for Raman spectra,
- IAENG IJCS 2020: An Automatic Approach to the Elevator Button Localization and Recognition

Yuan Ze University

2014 – 2018

BS, Electrical Engineering

GPA:3.77/4.0

COMPETITIONS

Unmanned Store–MATLAB Deep Learning Competition, Accelerate the Power of AI 2019

Feb 2019

- Placed in top 1% by designing an auto recognition system for unmanned store with faster R-CNN.
- Improved accuracy to 68% by using Resnet-50, connected component for multi-object recognition with 6k images and 105 classes.

PROJECTS

Video Streaming Platform Development

PHP MySQL AWS HTML JavaScript Dec 2020 🌐

- Provided streaming service by designing different web endpoints including video and profile management.
- Provided cloud solution on AWS EC2 instance with server hosting through XAMPP.
- Developed a subscription system with PayPal API to distinguish available contents to different users.
- Supported live search system using AJAX to dynamically load the result after query.

Mysterious Missing Migrants Visualization

JavaScript HTML CSS D3 Dec 2019 🌐

- Designed a visualization platform for migrant casualty and the degree of danger in different countries based on D3 world map.
- Aggregated the relationship in 17k dataset including cause of death, gender, nationality, group size, and incident region by D3 interactive table.
- Visualized dead and missing amount with mouse hover on migration routes and countries.
- Emphasized the cause of death by different font size according to casualties in word cloud.

Web Browser Development

Python JavaScript DukPy Tkinter Oct 2020 🌐

- Created GUI window by Tkinter and handled URL connection through BSD socket interface.
- Converted HTML tokens into DOM tree which supports attributes and malformed tags.
- Enable CSS styling by using inheritance and privilege level to determine the object style.
- Supported basic JavaScript with DukPy interpreter and allowed scripts to modify page elements.

Recommendation System with Amazon

Python PyTorch Jan 2020 🌐

- Developed a ranking model based on reviews with CNN and attention network to promote products to users.
- Improved accuracy by 0.8% by combining local convolution with global self-attention for rating prediction.
- Enhanced the interpretability for the system to answer why certain items will be recommended by visualizing the attention score on reviews.