Yu-Ching Hsu

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Portfolio: https://hsuyuching.github.io

SKILLS

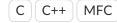
Python C JavaScript Java PHP TypeScript
Node.js Angular Git AWS EC2 MFC D3
MySQL HTML CSS TensorFlow PyTorch

EXPERIENCE

Logitech Inc.

July 2018 - Sep 2018 %

Software Engineer Intern



- 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 Logitect 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 Al 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.

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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 Da 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

Created GUI window by Tkinter and handled URL connec-

Oct 2020 %

- tion through BSD socket interface.Converted HTML tokens into DOM tree which supports
- 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.