

Vic Hsu

vich.4y4gj4@gmail.com | (+866)981386177 | [linkedin/f9g8h7j654/](https://www.linkedin.com/in/f9g8h7j654/) | [github/vichsuWah](https://github.com/vichsuWah) | <https://vichsuwah.github.io/>

EDUCATION

BSc. in Electrical and Computer Engineering

NATIONAL CHIAO TUNG UNIVERSITY (NCTU)

Overall GPA: 3.91/4.0

Last 60 credits: 4.0/4.0

Hsinchu, Taiwan | 2015 - 2019

MSc. in Graduate Institute of Communication Engineering

NATIONAL TAIWAN UNIVERSITY (NTU)

Overall GPA: 4.0/4.0

Taipei, Taiwan | 2019 - 2021

Teacher Assistant (TA): Advanced Digital Signal Processing

WORK EXPERIENCE

MEDIATEK | SUMMER INTERN

Hsinchu, Taipei | May 2020 – Aug 2020

- The department of my summer internship is working on the algorithm development of the new generation video coding, and the project I did this internship is to analyze whether it is possible to **select the best compression mode** based on the properties of the coding unit.
- We also analyzed the statistical properties of coding units to check the best mode distribution in some cases.
- First use the traditional machine learning algorithm to design the mode selection algorithm, and then design the deep learning training method according to the analysis result of the hand-crafted method.

PROJECTS

DEEFAKE DETECTION (2021 SPRING)

PYTHON, PYTORCH, COMPUTER VISION

We proposed a method that using multiple image noise analysis modalities (DCT_HPF, ELA and PRNU) and combining with the two-branch prediction network to detect the forgery artifacts for deepfake image/video detection.

FACE ANTI SPOOFING (2020 AUTUMN)

PYTHON, PYTORCH, COMPUTER VISION

Our solution is based on a top conference paper and some modifications have been added by ourselves. The major observation is that with heavy data augmentation, especially background removal, we speculate that the spoofing artifacts on the faces (foreground) and background have obvious deviations.

DOCUMENT INFORMATION EXTRACTION (2020 SPRING)

PYTHON, PYTORCH, NATURAL LANGUAGE PROCESSING

The goal of this project is to extract information regarding a predefined set of tags for each line inside given lines of a document. We use bert as word embedding and combined with bi-LSTM for better performance.

FACE DETECTION (2019 AUTUMN)

MATLAB, MACHINE LEARNING, COMPUTER VISION

A traditional face detection algorithm that using contours, color, and facial features. Without using a large amount of training data, it's a hand-crafted algorithm that can effectively detect the frontal faces inside the images.

HOUSE PRICE PREDICTION WITH LARGE-SCALE ATTRIBUTES (2019 AUTUMN)

PYTHON, MACHINE LEARNING, DATA SCIENCE

This is a prediction competition from Kaggle. We need to do a lot of preprocessing steps, such as data cleaning, detecting outliers, processing missing values, etc., to filter out useless information. Then use XGBoost, Random_Forest, Support_Vector_Regression to form our ensemble prediction model.

SCHOLASTIC ACHIEVEMENTS

- Academic Achievement Award * 2 in B.S
- Blue Certificate of TOEIC

SKILLS

Languages: Python, Matlab, C++, Bash

Technology: Git, \LaTeX , Linux, Visual Studio