Jhao-Ting (Jack) Chen

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Education

Carnegie Mellon University — *Pittsburgh, US*

Master of Science in Electrical and Computer Engineering — *Sep. 2022 - May. 2024 (expected)*

National Tsing Hua University — *Hsinchu, Taiwan*

Bachelor of Science in Electrical Engineering, GPA: 3.93/4.3 — *Sep. 2017 - Jun. 2021*

- Received academic excellence award and multiple academic achievement scholarships.

Work Experience

Artificial Intelligence & Image Understanding Lab, Academia Sinica — *Taipei, Taiwan*

Research Assistant, Advisor: Prof. Jun-Cheng Chen — *May. 2021 - Feb. 2022*

- Researched face forgery detection, participated in OpenMFC 2020 contest, and deployed deepfake detection model to industrial use.
- Exploited image-text relationship and applied on text-guided object and action localization, using CLIP and Grad-CAM.
- Responsible for all experiments and paper writing for an accepted ICASSP 2022 paper (joint first author).

Microsoft — *Taipei, Taiwan*

Software Engineering Research and Development Intern — *July. 2020 - July. 2021*

- Developed parallel computing scripts for the Microsoft Azure server nodes reliability evaluation.
- Set up software/hardware automation tests for sever health investigation in the Azure data center lab.
- Audited Azure server health log databases and developed real-time responsive dashboards for reliability metrics computation.

Logitech — *Hsinchu, Taiwan*

Picture Analysis and System Development Intern — *Mar. 2020 - Jun. 2020*

- Analyzed pictures of product materials and implemented machine learning in industrial application.
- Developed and systemized experiment workflows and web applications for team-wide usage.
- Designed experiments and verification based on the developed system for product material design.

Publications

Jhao-Ting Chen, H.A. Hsia, C.H. Lin, B.H. Kung, D.S. Tan, J.C. Chen, K.L. Hua. *CLIPCAM: A Simple Baseline For Zero-shot Text-guided Object and Action Localization*. **ICASSP 2022**. aiiu-lab/CLIPCAM

Projects

Paper Re-implementation: PCL-I2G for Deepfake Detection **jtchen0528/PCL-I2G** — *Aug. 2021*

- Unofficial implementation of Learning Self-Consistency for Deepfake Detection (ICCV 2021) proposed by AWS AI.
- Detected deepfake faces with self-supervise learning by generating inconsistent faces for training.
- Improved accuracy by applying multi-head self-attention and concatenating in-layer feature maps.

Locality Sensitive Hashing on A Lite BERT **jtchen0528/Albert_LSH** — *May. 2020 - Jun. 2020*

- Undergraduate research in Vision Science Lab, NTHU EE. Advised by Prof. Min Sun.
- Achieved better space complexity by replacing multi-head self-attention in ALBERT with Locality Sensitive Hashing.

EasySheet Startup **jtchen0528/EasySheet** — *Mar. 2019 - Jun. 2019*

- A fast and simple music sheet editor for guitar beginner. Generate a custom sheet in 3 minutes!
- Built with React and JavaScript, hosted on AWS EC2 with EC2 database and authentication.
- Received multiple investment requests from our users.

Jack's Blog **jtchen0528/blog** — *Jul. 2019 - Aug. 2019*

- Featuring user login, posts and user feeds stored in database, and real-time chats for me and my friends.
- Functions driven by Google Firebase authentication, realtime database, Firestore. Hosted on GitHub page.

Skills

Programming	Python, C/C++, JavaScript, PowerShell, Shell Script, SQL, Verilog
Tools/Frameworks	PyTorch, Tensorflow, React, Nginx, Node.js, Git, AWS, GCP, Firebase
Deep Learning	Computer Vision, Natural Language Porcessing, Deepfake Detection, Object Detection