

# Cheng-Yen Chris Yang

Seeking 2021 Full-time Summer Internship in Applied Scientist (Computer Vision)

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## Professional Skills

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**Languages** Python, C++, PHP, Matlab  
**Frameworks** Data(Hadoop, Spark), ML/DL(Pytorch), CV(OpenCV), NLP(nltk, coreNLP)

## Educations

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### University of Washington

Seattle, United States

**Ph.D. in Electrical and Computer Engineering** - GPA: 3.84

Sep. 2019 - present

- Faculty Advisor: Professor Jenq-Neng Hwang
- Selected Courseworks: Computer Vision, Deep Learning, Artificial Intelligence, Machine Learning for Big Data

### National Taiwan University

Taipei, Taiwan

**B.S. in Electrical Engineering** - GPA: 3.78

Sep. 2014 - Jan. 2019

- TA Experience: Machine Learning (Head TA), Deep Learning for Computer Vision
- 2018 The Presidential Award (Top 1% in Department of Electrical Engineering)

## Research Experiences

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### Information Processing Lab, University of Washington

Aug. 2020 - present

Research Assistant (Advisor: Prof. Jenq-Neng Hwang)

Seattle, United States

- Developed an automated multi-view camera system for multi-person 3D pose estimation and tracking in adult day care services in cooperation with Quanta Research Institute using Pytorch for health monitoring and emergency detection.
- Implemented an LSTM temporal attention model and soft bio-metric re-ranking algorithm to achieve 50.3% accuracy on the CASIA-E dataset and ranked 5th for the 2020 ACCV HID challenge.

### Vision and Learning Lab, National Taiwan University

Feb. 2017 - Feb. 2019

Research Assistant (Advisor: Prof. Yu-Chiang Frank Wang)

Taipei, Taiwan

- Designed and implemented a weakly-supervised learning method for attention-guided skull fracture classification with a 91% overall accuracy and +3% improvement on baseline models using Pytorch.
- Contributed to the intracranial hemorrhage detection AI system, partnering with deep01, and deployed in several Taiwan medical centers and hospitals for daily clinical prognosis.

## Intern Experiences

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### Software Engineer Intern

Jun. 2020 - Sep. 2020

ASML (Advanced Semiconductor Materials International)

San Diego, United States

- Implemented performance analysis libraries for Nozzle Steering Module signals and measurements to simplify the verification processes using Python.
- Built and maintained over 2000+ lines code of internal testing python packages used by EUV machine source performance testing and analysis.

### Machine Learning Engineer Intern

Jun. 2019 - Aug. 2019

Envive Inc.

Taipei, Taiwan

- Designed a multi-layer convolutional network model for link predictions of medical-based knowledge graphs with a 96% overall precision and +5% improvement on the datasets using Pytorch.
- Built and maintained over 2000+ lines code of deep learning API and internal database python packages used by the automatic diagnosis system and other products.

## Publications

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"Multi-modal Learning for Long-tailed Aerial View Object Classification", *Cheng-Yen Yang, Jiarui Cai, Hung-min Hsu, Jenq-Neng Hwang*, In submission to 2021 New Trends in Image Restoration and Enhancement workshop (CVPR 2021 Workshop).

"Weakly-Supervised Learning for Attention-Guided Skull Fracture Classification in Computed Tomography Imaging" [link], *Cheng-Yen Yang, Chih-Hsin Lo, Huan-Chih Wang, Jen-Hai Chou, Yu-Chiang Frank Wang*, Accepted by 2019 IEEE International Conference of Image Processing (ICIP 2019).