

# Cheng-Han Lee

Home Page : [steven413d.github.io](https://steven413d.github.io)

Email : [steven413d@gmail.com](mailto:steven413d@gmail.com)

Mobile : +886-0952-787-470

## EDUCATION

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- **National Taiwan University** Taipei, Taiwan  
*Master of Computer Science; GPA: 4.03 / 4.30* Sep. 2016 – Aug. 2018
- **National Chiao Tung University** Hsinchu, Taiwan  
*Bachelor of Electrical Engineering; CS related GPA: 3.86 / 4.30* Sep. 2012 – June. 2016

## WORK EXPERIENCE

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- **SenseTime Ltd.** Shenzhen, China  
*Research Intern, supervised by Prof. Ping Luo, Dr. Ziwei Liu, and Dr. Ruimao Zhang* Sep 2018 - April 2019
  - **CelebAMask-HQ [550+ stars, 90+ forks]**[\[link\]](#): (1) We present MaskGAN for diverse and interactive face manipulation. (2) We contribute CelebAMask-HQ, a large-scale high-resolution face dataset with mask annotations.
  - **Switchable Normalization on Generative Adversarial Network**: To increase the stability of GAN, we discover the probability of learning to select different normalizers (e.g. layer normalization, instance normalization, and spectral normalization) for different layers of a discriminator by meta-learning.
- **National Taiwan University** Taipei, Taiwan  
*Research and Teaching Assistant, supervised by Prof. Winston H. Hsu* Sep 2016 - Aug 2018
  - **Research Assistant - Communications and Multimedia Lab**: Research mainly focuses on deep learning, generative model and low-level vision including super-resolution on facial images and image synthesis.
  - **Teaching Assistant**: Linear Algebra (2017 Fall), Digital System Design and Laboratory (2017 Spring, **Outstanding TA Award**)), and Seminar Class (2016 Fall).
- **QNAP Systems** Taipei, Taiwan  
*Software Engineering Intern, supervised by Mr. Paul Chu* July 2016 - Aug 2016
  - **Implement an universal cloud client of Slack**: Integrate the application of QNAP NAS (Network-Attached Storage), Connect To Cloud Drive, with Slack. Enable users to synchronize files between Slack and QNAP NAS.

## PUBLICATIONS & RESEARCH PROJECTS

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- **MaskGAN: Towards Diverse and Interactive Facial Image Manipulation** [\[link\]](#)  
*Cheng-Han Lee, Ziwei Liu, Lingyun Wu, Ping Luo CVPR-2020*
- **PIVTONS : Pose Invariant Virtual Try-on Shoes with Conditional Image Completion** [\[link\]](#)  
*Chao-Te Chou, Cheng-Han Lee, Kaipeng Zhang, Hu-Cheng Lee, Winston H. Hsu ACCV-2018(Oral)*
- **Attribute Augmented Convolutional Neural Network for Face Hallucination** [\[link\]](#)  
*Cheng-Han Lee, Kaipeng Zhang, Hu-Cheng Lee, Chia-Wen Cheng, Winston H. Hsu CVPRW-2018*
- **Drone-View Building Identification by Cross-View Visual Learning** [\[link\]](#)  
*Chun-Wei Chen, Yin-Hsi Kuo, Tang Lee, Cheng-Han Lee, Winston H. Hsu CVPRW-2018*

## SELECTED PROJECTS

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- **Loss Functions for Face Image Super Resolution with Neural Network**: Discuss six combinations of loss function for  $8\times$  scales face image super resolution problem (NTU CS MLDS course) [\[link\]](#)
- **House Monitor - A Real-Time Surveillance Android App**: Users can control the angle of a remote camera and see real time video of house on a mobile phone. (NCTU CS embedding system course, be elected as 1<sup>st</sup> price in final project competition) [\[link\]](#)
- **Intelligent Speech Emotion Recognition Android App**: Users can record a piece of voice and identify its emotion on a mobile phone. (NCTU EE spacial project course, supervised by Prof. Jen-Tzung Chien) [\[link\]](#)

## PROGRAMMING SKILLS

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- **Languages:** Python, C/C++, Java, Matlab
- **Toolkits:** Pytorch, Tensorflow, Caffe, Latex, CUDA, OpenCL, Android SDK
- **Platforms:** Linux, Vim, Git

## RELATED COURSES

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- **Fundamental Courses:** Introduction to Computer and Programming (A, NCTU EE), Advanced Object-Oriented Programming (A-, NCTU EE), Data Structures (A, NCTU CS), Algorithms (A, NCTU EE), Operating System (A+, NCTU EE), Computer Organization (A-, NCTU EE)
- **Multimedia and Machine Learning:** Computer Vision (A+, NTU CS), Introduction to Digital Speech Processing (A, NTU CS), Music Signal Analysis and Retrieval (A+, NTU CS), Advanced Topics in Multimedia Analysis and Indexing (A+, NTU CS), Machine Learning (A-, NTU EE), Machine Learning and Having It Deep and Structured (A-, NTU EE)
- **System:** Introduction to Computer Network (A+, NCTU CS), Introduction to Embedded System (A+, NCTU CS), Parellel Programming (A+, NTU CS)

## LANGUAGES

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- **Chinese:** Native
- **English:** TOEFL 85

## LEADERSHIP

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- **Student Association of NCTU ECE** Hsinchu, Taiwan  
*Leader of Information and Public Relations Department* Sep 2014 - Jun 2015
- **NCTU Fundamental Cultural Services Club** Hsinchu, Taiwan  
*Leader of Equipment Section in Summer Camp, Vice Director in Winter Camp* Mar 2013 - Feb 2014

## REFERENCES

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- **Research mentor - Ziwei Liu:** Research Fellow, CUHK, [zwliu.hust@gmail.com](mailto:zwliu.hust@gmail.com) [\[link\]](#)
- **Research mentor - Ruimao Zhang:** Research Fellow, CUHK, [zhangruimao@sensetime.com](mailto:zhangruimao@sensetime.com) [\[link\]](#)
- **Research mentor - Ping Luo:** Assistant Professor, HKU, [pluo.lhi@gmail.com](mailto:pluo.lhi@gmail.com) [\[link\]](#)
- **Master advisor - Winston H. Hsu:** Professor, NTU (Taiwan), [whsu@ntu.edu.tw](mailto:whsu@ntu.edu.tw) [\[link\]](#)