

# Kuo-Hao Zeng

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📄 <https://kuohaozeng.github.io>

*Seeking a PhD Placement by September, 2018 - 24 years old*

## Education

- 2016–2017 **Stanford University - Computer Science Major**, *Computer Vision, Machine Learning*.  
Visiting Student in Vision Lab  
Supervised by Dr. Juan Carlos
- 2014–2017 **National Tsing Hua University - Electrical Engineering Major**, *Computer Vision*.  
Master Student in Vision Science Lab  
Supervised by Prof. Min Sun  
GPA: 4.3/4.3  
Rank: Top 1%  
Member of Phi Tau Phi Scholastic Honor Society of the Republic of China
- 2010–2014 **National Sun Yet-Sen University - Mechanical and Electromechanical Engineering Major**.  
GPA: 88.46/100, 3.64/4.0 (overall); 88.73/100, 3.7/4.0 (major); 93.29/100, 3.9/4.0 (last-60)  
Rank: Top 12.5% (7th/56)

## Publication

- Journal Min Sun, **Kuo-Hao Zeng**, Yen-Chen Lin, Ali Farhadi, "Semantic Highlight Retrieval and Term Prediction". *IEEE Transactions on Image Processing*.
- Conference **Kuo-Hao Zeng**, Shih-Han Chou, Fu-Hsiang Chan, Juan Carlos Niebles, Min Sun, "Agent-Centric Risk Assessment: Accident Anticipation and Risky Region Localization". *CVPR17*, **Spotlight**.  
**Kuo-Hao Zeng**, Tseng-Hung Chen, Ching-Yao Chuang, Yuan-Hong Liao, Juan Carlos Niebles, Min Sun, "Leveraging Video Descriptions to Learn Video Question Answering". *AAAI17*.  
**Kuo-Hao Zeng**, Tseng-Hung Chen, Juan Carlos Niebles, Min Sun, "Title Generation for User Generated Videos". *ECCV16*.  
**Kuo-Hao Zeng**, Yen-Chen Lin, Ali Farhadi, Min Sun, "Semantic Highlight Retrieval". *ICIP16*.
- Workshop Tseng-Hung Chen, **Kuo-Hao Zeng**, Wan-Ting Hsu, Min Sun, "Video Captioning via Sentence Augmentation and Spatio-Temporal Attention". *ACCV16*.  
**Kuo-Hao Zeng**, Yen-Chen Lin, Ali Farhadi, Min Sun, "Viralets: Learning from Viral Videos to Identify Semantic Highlight in Personal Videos". *CVPR15*.
- Domestic Conference **Kuo-Hao Zeng**, Tseng-Hung Chen, Ching-Yao Chuang, Yuan-Hong Liao, Juan Carlos Niebles, Min Sun, "BRAIN4VQA: Video Question Answering via Deep Networks". *CVGIP16*, **Best Paper Award**.  
**Kuo-Hao Zeng**, Yen-Chen Lin, Ali Farhadi, Min Sun, "Semantic Highlight Detection in Viral Videos". *CVGIP15*, **Best Paper Award**.

## Honors and Awards

- 2016 **Ministry of Education Republic of China (Taiwan) Scholarship (2016) for visiting Stanford Vision Lab**, *Ministry of Education Republic of China (Taiwan)*.  
**Student Travel Award for ICIP, IEEE**.  
**Member of Phi Tau Phi Scholastic Honor Society of the Republic of China, Taiwan**.  
Top 3% Students per year in College of EECS at NTHU.  
**Digital Drift Best Paper on Deep Learning for Visual Analysis - 2nd place, CVGIP**.  
Paper Title: BRAIN4VQA: Video Question Answering via Deep Networks.

- 2015 **NovaTek Scholarship**, *NovaTek*.  
**Best Paper Award in 28th IPPP Conference on CVGIP**, *CVGIP*.  
 Paper Title: Semantic Highlight Detection in Viral Videos.
- 2014 **MediaTek summer intern final group project presentation - 2nd prize**, *MediaTek*.
- 2013 **NSYSU Undergraduate Outstanding Project**, *NSYSU*.
- 2010 – 2014 **Presidential Awards(amount to 5 semesters)**, *NSYSU*.  
 Awarded to top 5% of students in each department of National Sun Yat-Sen University for each semester.

## Research Experience

- 2016–2017 **Vision Lab**, *Stanford University*, Computer Vision, Machine Learning, Deep Learning.  
 Video Representation Learning.  
 Video Anticipation.  
 Risky Assessment in Accident Video.
- 2014–2017 **Vision Science Lab**, *NTHU*, Computer Vision, Machine Learning, Deep Learning.  
 Video Description, Question-Answering and Dialog System.  
 Large Scale Video Data Collection.  
 Video Event Recognition, Summarization.
- 2013–2014 **Bio-Medical Micro Electro Mechanical Systems Lab**, *NSYSU*, Signal Processing, Statistics.  
 The Correlation between Heart Rate Variability and Apnea-Hypopnea Index is BMI Dependent.  
 The Relation between Vertical Ground Reaction Force and Heart Rate during Treadmill Running.

## Experience

- Fall 2015 **Teaching Assistant of Computer Vision**, *NTHU (Graduate School)*, Hsinchu, Taiwan.  
*Matlab/Python environments*
- Spring 2015 **Teaching Assistant of Signal and System**, *NTHU*, Hsinchu, Taiwan.
- Summer 2014 **MediaTek Summer Intern**, *MediaTek*, Hsinchu, Taiwan.  
 Developing a "Control and Command System" demonstrator (Hardware and Software) for Fiber-optic communication IC and Verification. *C++/Perl/Matlab environments*
- Summer 2013 **HIWIN Summer Intern**, *HIWIN*, Taichung, Taiwan.  
 Verify and Test Harmonic Drive.  
*Matlab environment*

## Selected Term Projects

- Project Computer Vision for Visual Effects: <https://sites.google.com/site/computervisionvisualeffectsg11/home>.
- Challenge Microsoft - MSR Video to Language Challenge: <http://ms-multimedia-challenge.com/leaderboard>.

## Core Course and Grades

- ML **Introduction to Optimization**, *NSYSU*, Kaohsiung, Taiwan.  
 96/100
- Introduction to Neural Networks**, *NSYSU*, Kaohsiung, Taiwan.  
 99/100
- Machine Learning Theory**, *NTHU*, Hsinchu, Taiwan.  
 A+/A+
- Advanced Machine Learning Theory**, *NCTU*, Hsinchu, Taiwan.  
 A+/A+
- Neural Network**, *NTHU*, Hsinchu, Taiwan.  
 A+/A+
- CV **Computer Vision for Visual Effects**, *NTHU*, Hsinchu, Taiwan.  
 A+/A+

PP **Parallel Programming**, *NTHU*, Hsinchu, Taiwan.  
A+/A+

## Programming Skills

Languages C, C++, C#, Python, Perl

Library MPI, OpenMP, Pthread, Cuda, OpenCV, LIBSVM, Caffe, TensorFlow, Theano, PyTorch

Simulation Matlabe, HSPICE

Other  $\LaTeX$

## Interests

- Computer Vision + Machine Learning
- Computer Vision + Natural Language
- Computer Vision + Robotics
- Artificial Intelligence
- AI-Complete
- Robotics