

# YUJIA CHEN

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## EDUCATION

### **Carnegie Mellon University – School of Computer Science**

*Master of Science in Computer Vision*

Pittsburgh, PA

08/2018 - 12/2019

**Core Coursework:** Computer Vision; Machine Learning (**Teaching Assistant**); Visual Learning and Recognition

### **University of Science and Technology Beijing (USTB)** GPA 3.83/4.0 (overall); 3.97/4.0 (major courses)

Beijing, China

*Bachelor of Science in Computer Engineering - Internet of Thing*

09/2014 - 06/2018

**Honors:** National Scholarship; National College Student Data Mining Contest, national wide Third Prize

## PUBLICATION

- **Yujia, C**; Lingxiao, S; He, R; Yibo, H. 2017. *Adversarial Occlusion-aware Face Detection. The 9th IEEE International Conference on Biometrics: Theory, Applications, and Systems (BTAS 2018) (Oral)*
- **Yujia, C**; Li, C. 2017. *GM-Net: Learning Features with More Efficiency. The 4th Asian Conference on Pattern Recognition (ACPR 2017) (Oral)*
- A. Wulamu; Yuanyu, Z; Yonghong, X; Xu, Y; **Yujia, C**. 2017. *Structural Technology Research on Symptom Data of Chinese Medicine. 19th International Conference on E-health Networking, Application & Services (Poster)*
- **Yujia, C**; Yifeng, P; Leiqi, W; Yuanyu, Z; Tao, Z. 2016. *Cyber-Enabled Traditional Chinese Medicine. In IEEE International Conference on IoT. (Video Demo)*

## PROFESSIONAL EXPERIENCE

### **Amazon Go**

Seattle, WA

*Applied Scientist*

01/2020 - now

- Design, implement and deploy algorithms for Just-Walk-Out Amazon Go store.

### **Amazon Go**

Seattle, WA

*Applied Scientist Intern*

05/2019 - 08/2019

- Designed and implemented a multi-customer activity detection model with MXnet from scratch that outperformed state-of-the-art model on the public dataset.
- Prepared and converted coordinates for the internal data from different camera views and coordinate systems.

### **Chinese Academy of Sciences, Institute of Automation**

Beijing, China

*Intern Researcher*

05/2017 - 06/2018

- Designed a partial face detector with adversarial methods with Caffe that outperformed state-of-the-art results by over 10% on partial face detection benchmarks. The paper was accepted as oral presentation by BTAS 2018.
- Created an easy-to-adapt face detection model with different settings with Pytorch which was widely used as baseline model in the research teams in CASIA.

### **Laboratory of IoT&Robotics at USTB**

Beijing, China

*Research Assistant*

09/2016 - 04/2017

- Designed an efficient feature extractor with model compression methods with Keras that achieved state-of-the-art results while reducing the model parameters to less than one million. The paper was accepted as oral presentation by ACPR 2017.
- Designed a low-resolution object detector and classifier with Keras and applied the model on TX2 platform.

### **Oracle China**

Beijing, China

*Intern-Software Development Division*

04/2016 - 06/2016

- Participated in enterprise database management and debugging, including data management and analysis.

## ACADEMIC PROJECTS

### **Cloth folding with Robot Arms**

Pittsburgh, PA

*Carnegie Mellon University, supervised by prof. David Held*

Winter 2019

- Collected a dataset for robot cloth folding and developed an unsupervised model for scene flow estimation.

### **Deep Slope Estimation with Formal Verification**

Pittsburgh, PA

*Carnegie Mellon University, supervised by prof. David Held*

Fall 2019

- Developed a model to estimate the normals of a given real-world point cloud from a velodyne, and compressed 90% of the model while keeping the best performance.

### **The Application of Image Caption for the Blind - Tell Me Eye Smart Glasses**

Beijing, China

*University of Science and Technology Beijing*

Spring 2017

- Developed a wearable device named Tell Me Eye Smart Glasses that is capable of converting images to audio through an image caption model and set up servers and transmitted data with a raspberry pi with WIFI connection.

### **Biological Data Analysis on miRNA Series**

Beijing, China

*China Academy of Mathematics and Systems Science*

Winter 2016

- Came up with a method for human microRNA-disease association prediction based on PageRank with microRNA clusters.

### **Data Mining for the Elderly**

Beijing, China

*University of Science and Technology Beijing*

Winter 2016

- Established a database for supporting local government's senior care projects.

- Crawled Personally Identifiable Information (PII) data of senior citizens from internet, as well as detailed information of local senior care facilities.

## **SKILLS**

*Programming Languages:* Python, Matlab, C/C++, HTML

*Toolkits:* Pytorch, MXnet, Caffe, Keras, Tensorflow