

YUJIA CHEN

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EDUCATION

Carnegie Mellon University – School of Computer Science GPA 4.03/4.33 Pittsburgh, PA
Master of Science in Computer Vision 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 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)*

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 achieved state-of-the-art results on MPII cooking2 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

Chest X-ray Abnormalities Detection Seattle, WA
Ongoing Kaggle Competition Spring 2021

- Developed a detection model based on Yolov5 and a classification model based on EfficientNet, proposed a merging strategy as strong post-processing method. Temporarily rank top 5% among more than 800 teams.

Self-supervised Representation Learning for Deformable Objects 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