Dinghow Yang | Curriculum Vitae

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EDUCATION

Tongji University **Shanghai,China**
B.Eng. in Software Engineering *Expected Graduation: June 2020*
GPA: 4.58/5.0 (90.8/100), Top 8%

Relevant Coursework: Calculus(A), Discrete Mathematics(A), Probability and Statistics(A), Combinatorics(A), Object-Oriented Programming(A), Data Structures(A), Algorithm Design And Analysis(A), Software Engineering(A), Human-Computer Interaction(A), Databases(A), Digital Image Processing(A), Computer Graphics(A) et al.
Self-study Coursework: Machine Learning, Google Machine Leraning Crash Course, Udacity Deep Learning, CS231n

EXPERIENCE

ilab **Tongji Univ, Shanghai**
Research Assistant *Aug. 2018 - Present*
- Focus on computer vision and medical image analysis
- Under the guidance of Prof.Jianwei Lu and Dr.Guokai Zhang

Graphic image research center **Tongji Univ, Shanghai**
Research Assistant *Oct. 2018 - Present*
- Focus on augmented reality and webAR
- Under the guidance of Prof.Jinyuan Jia

SAP **SAP,Shanghai**
Internship *Jul. 2018 - Sep. 2018*
- I took part in the internship of SAP VT project.

Microsoft Student Summer Camp **Microsoft, Beijing**
Participant *Aug. 2018*
- I was a participant of Microsoft Student Summer Camp 2018 at MSRA

Microsoft Student Club **Tongji Univ,Shanghai**
Chairman *Jun. 2018 - Present*
- Responsible for organizing club,managing every aspect of the club.

Huawei Student Club **Tongji Univ,Shanghai**
Vice minister of technology *Apr. 2017 - Mar. 2018*
- Responsible for teaching club members to learn some new skills,such as Java,Android.

HONORS & AWARDS

- 17' National second Prize in China Mathematical Contest in Modeling, Ministry of Education(Top 6.5%
- 17'&18' First-class scholarship, Tongji University(Top 5%)
- 17'&18' Social activity scholarship, Tongji University(Top 5%)
- 17'&18' Elite student, Tongji University(Top 5%)
- 18' Ali Tianchi Big Data Competetion ICPR MTWI 2018 Word Detection 101/1424, ICPR2018(TOP 7%)
- 18' Elite Leader of Microsoft Student Club, MSRA
- 18' Microsoft Practice Space Outstanding Winner, MSRA(10 of 119)
- 18' Shanghai First Prize in China Mathematical Contest in Modeling, Ministry of Education(Top 10%
- 19' National Undergraduate Innovation Programs certified as eligible

PROJECTS

OCR on Video *Dec. 2017 – Mar. 2018*

Advisor: Researcher Chao Chen, Researcher Alan Ip, MSRA

- A project of Microsoft Student Club Practice Space, focusing on extracting video caption.
- Got Outstanding winner prize(10 of 119 teams)
- Based on top-hat transform, and using perceptive hash algorithm for caption deduplication, our algorithm achieving more than 390 frames per second, and the F1 score is higher than 95%.

Pulmonary Nodule Classification *Aug. 2018 – May. 2019*

Advisor: Prof.Jianwei Lu, Dr.Guokai Zhang, ilab, Tongji Univ

- A project about automatic pulmonary nodule classification, using neural network and attention mechanism.
- Proposed two attention mechanism operations, the first attention operation extracts the varied contextual and salient spatial features with our designed spatial pyramid attention block (SPAB). The second attention operation utilizes the semantic attributes as additional information cues to weight the malignancy features which is called the attribute attention block (AAB).
- Achieved competitive performance compared with state-of-the-art methods, on the LIDC dataset. And a paper has been submitted to MICCAI 2019.

Prostatic Cancer Segmentation *Oct. 2018 – Present*

Advisor: Prof.Jianwei Lu, Dr.Guokai Zhang, ilab, Tongji Univ

- A project about semantic segmentation of prostatic cancer, focusing on predicting the cancer region and predicting the best point for prostate puncture.
- Used Mask-RCNN and U-net as the backbone network, and added Grad-CAM to generate the probability image.
- Basked on the MRI prostate cancer dataset, used 3D network architecture, could predict the volume of cancer region.

PUBLICATIONS

- Guokai Zhang, Xiaoang Shen, **Dinghao Yang**, Ye Luo and Jianwei Lu. *3D Attention Based Network for Automatic Pulmonary Nodule Classification.* submitted to MICCAI 2019 (under review)

TECHNICAL STRENGTH

- Programming Languages: Python, C/C++, C#, Matlab, Java, HTML/CSS, LaTeX
- Platforms: Windows, Linux, macOS
- Version Control: Git
- Packages&Tools: Tensorflow, Keras, PyTorch, Azure, OpenCV, NNI

ADDITIONAL

- I'm a founder of a commonweal organization,which focuses on education, and I've made several speeches in a senior high school
- Interest :Machine Learning,Deep learning,Computer vision(Now I'm learning them by myself and do related projects in our laboratory)