



Dinghow Yang | Curriculum Vitae

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EDUCATION

Tongji University

B.Eng. in Software Engineering

GPA: 4.61/5.0 (91.1/100), Top 6%

Shanghai, China

Expected Graduation: June 2020

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 Learning Crash Course, Udacity Deep Learning, CS231n

RESEARCH EXPERIENCE

iLab

Advisor: Prof. Jianwei Lu, School of Software Engineering

○ Focus on Computer Vision and Medical Image Processing

○ Use Neural Network and Deep Learning to help medical image analysis, and I mainly take part in two projects: pulmonary nodule classification and prostatic cancer segmentation, introduced in Project part

Tongji Univ, Shanghai

Aug. 2018 - Present

Graphic Image Research Center

Advisor: Prof. Jinyuan Jia, School of Software Engineering

○ Focus on Augmented Reality and WebAR

○ I lead a team to do some exploratory develop on WebAR, mainly using AR.js, WebARonARCore. And solved the problem on multiple action control of gltf model with AR.js.

Tongji Univ, Shanghai

Oct. 2018 - Present

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, Tongji University(Top 5%)
- 19' Shanghai Second Prize in Think Youth-Shanghai International Digital Creation, Innovation & Entrepreneurship Competition, Shanghai Education Committee(Top 10%)

PROJECTS

Misaki AR

Aug. 2018 – Jan. 2019

- An AR project about virtual dancer with Vuforia & AR.js
- The user can vocally control the character to sing, dance and do other behaviors, the virtual character can interact with the user by voice and motion.
- Released on two platform. One is implemented by Unity & Vuforia, which can run on PC and mobile devices, the other is implemented by AR.js, which is deployed on website, and can be accessed directly in browser.

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

ACTIVITIES

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*Vice minister of technology***Tongji Univ, Shanghai***Apr. 2017 - Mar. 2018*

- Responsible for teaching club members to learn some new skills, such as Java, Android.

TECHNICAL STRENGTH

- Programming Languages: Python, C/C++, C#, Matlab, Java, HTML/CSS, Javascript, L^AT_EX
- Platforms: Linux, Windows, macOS, Android
- 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)