

Shicheng Chen

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- <https://github.com/ShichengChen/>

JOB

- Nanyang Technological University
 - Project Officer
 - School of Computer Science and Engineering
 - 10/2017-09/2018
- National University of Singapore
 - Research Assistant
 - School of Computing
 - 10/2018-now

EDUCATION

- Tianjin University
 - Bachelor of Engineering
 - School of Software Engineering
 - 09/2013-07/2017
 - GPA: 3.19 / 4.0

PUBLIC LESSONS

- Convolutional Neural Networks for Visual Recognition
 - Stanford University cs231n
 - finish all videos and homework
- Machine Learning
 - Stanford University cs229
 - finish all videos and homework
- Data Science
 - Harvard University cs109
 - finish most videos and homework

SKILLS

- C/C++
 - Over 30000 lines:
 - familiar with OpenCV and STL
 - CUDA programming
- Python
 - familiar with PyTorch, Pandas, Scikit-learn and NumPy

AWARDS

- ACM International Collegiate Programming Contest
 - Asia Regional Contest

- Shanghai Site: 2014
- Bronze Medal
- The Beauty of Programming
 - Top 250/7764
 - Hosted by Microsoft: 2015
- Astar Contest
 - Top 415/7084
 - Hosted by Baidu: 2015

PUBLICATION

- Direct, Near Real Time Animation of a 3D Tongue Model Using Non-Invasive Ultrasound Images
 - **Shicheng Chen**, Yifeng Zheng, Chengrui Wu, Guorui Sheng, Pierre Roussel, Bruce Denby
 - Presentation in a **lecture** session at the ICASSP 2018
 - Implement Snake algorithm to extract the sagittal contour from ultrasound images and Select five points from the contour
 - Use these five points to move a 3D tongue model
 - Extract contour or some other information from the model
 - Use the information from the 3D tongue model to tune the snake algorithm
- Predicting Tongue Motion in Unlabeled Ultrasound Video Using 3D Convolutional Neural Networks
 - Chengrui Wu, **Shicheng Chen**, Guorui Sheng, Pierre Roussel, Bruce Denby
 - Presentation in a **poster** session at the ICASSP 2018.
 - Use the convolutional neural network for several continuous frames to predict an upcoming tongue image. Make use of both spatial and spatial information.
 - Implement the convolutional neural network to extract the contour from the ultrasound images (semantic segmentation) only by Python and Numpy instead of Deep Learning Libraries.
 - Implement the vectorized convolution layer, deconvolution layer, max pooling, up pooling, average pooling, batch normalization, RELU.
 - **Challenge**: full vectorized implementation for convolution, pooling, batch normalization layer.

PROJECT

- Audio Source Separation
 - Obtain accompaniment and vocals from mix music.
 - Use residual neural network as an encoder to raw audio.
 - Use modified WaveNet as a decoder.
 - The encoding is used to condition a WaveNet decoder.
 - More detail on <https://github.com/ShichengChen/Audio-Source-Separation>