

Shicheng Chen

Email: coder.chen.shi.cheng@gmail.com
Home page: <https://shichengchen.github.io/>

Education

BS in Software Engineering Tianjin University GPA: 3.19 / 4.0 2013-2017

Public Lessons (finish all videos and homework)

Stanford cs231n Convolutional Neural Networks for Visual Recognition

Stanford cs229 Machine Learning

Harvard cs109 Data Science

Experience

Project Officer — Nanyang Technological University 2017.10-now

Skills & Abilities

C, C++ Over (30000 lines)

Python, Java, C# (Over 3000 lines)

Pandas, scikit-learn, NumPy, MXNet, OpenCV, STL (Familiar)

Awards

Bronze Medal The ACM-ICPC Asia Regional Contest Shanghai Site. 2014

Top 250/7764 The Beauty of Programming, hosted by Microsoft. 2015

Top 415/7084 Astar Contest, hosted by Baidu. 2015

Top 14/614 Dog Breed Identification Kaggle Playground (IN PROGRESS) 2018

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(oral)** session at the ICASSP 2018

Implement Snake algorithm to extract the sagittal contour from ultrasound images and Select five points from contour

Use these five points to move a 3D tongue model

Extract contour or some other information from model

Use the information from the 3D tongue model to tune the snake algorithm

Challenge: use dynamic programming to implement the Snake algorithm for ultrasound images.

When the users swallow, the tongue sagittal contour will almost disappear, the snake algorithm still could follow the contour.

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.

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.

Use the convolutional neural network for several continuous frames to predict an upcoming tongue images. Make use of both spatial and spatial information.

Challenge: full vectorized implementation for convolution, pooling, batch normalization layer.

Project

Gomoku Artificial Intelligence

Minimax algorithm

Alpha-beta pruning

Heuristic evaluation function: how good it would be for a player to reach that position

By using ordering heuristics to search parts of the tree that are likely to force alpha-beta cutoffs early without sacrificing accuracy

Narrowing search window base on experience

Challenge: design evaluation function and ordering heuristics