JIARUI GAO

School of Electrical & Computer Engineering
Carnegie Mellon University
Mountain View, CA

Phone: +1 (650)2158566
Email: jiarui.gao@sv.cmu.edu
Homepage: http://jiaruigao.com

EDUCATION

Carnegie Mellon University, Silicon Valley Sept 2018 - present
Master in Software Engineering
Fudan University, Shanghai, China Sept 2014 - Jun 2018
Bachelor in Computer Science and Technology, Outstanding Student Honor Program

PUBLICATIONS

Jiarui Gao, Yanwei Fu, Yu-Gang Jiang, and Xiangyang Xue. *Frame-Transformer Emotion Classification Network*, In ACM International Conference on Multimedia Retrieval(ICMR), 2017 [pdf][code and data]

- Propose a unified framework for solving emotion classification, emotion attribution and emotion-oriented summarization jointly with only video-level supervision.
- Adopt spatial transformer network at temporal scale for video key segments extraction, i.e. video detection.

Guoyun Tu, Yanwei Fu, **Jiarui Gao**, Boyang Li, Yu-Gang Jiang and Xiangyang Xue. *A Multi-task Neural Approach for Emotion Attribution, Classification and Summarization*, Under review of IEEE Transactions on Multimedia

- Propose a novel Bi-stream end-to-end trainable neural. Compared to the state-of-the-art performance on *Ekman dataset*, we improve classification accuracy by 6.1%.

EXPERIENCE

Corporate & Funding Technology, Morgan Stanley Jul 2017 - Sept 2017
Summer analyst supervised by Xiaozhong Zhang

Flow Engine for Outside Business Interest System

- Implement an engine rendering decision process with a given set of tree-like rules.
- Front-end: Graph algorithm design and implementation in AngularJS2.0.
- Back-end: Database design and implementation in Java Spring Framework and DB2.

BigVid Lab, Fudan University Nov 2015 - Jun 2018
Research assistant supervised by Prof. Yanwei Fu & Prof. Yu-gang Jiang

- Project *Video Multi-emotion Recognition* funded by Fudan Undergraduate Research Opportunities Program.
- Implement video key frame extraction based on frame encoding approach and visual attention model.
- Zero Shot Learning for Image Recognition. Propose a graph-based approach for retrofitting word vectors and a better visual-semantic embedding regarding to the tuned semantic space.

PROJECTS

Image Shadow Detection and Removal - Course project for Digital Image Processing. Propose algorithms using only region-based image appearance features, no dataset or model training needed.[pdf][code][slides]
Speech Recognition for Words - Course project for Digital Signal Processing and Speech Signal Analysis using MFCC feature and LSTM in Keras.[code]
A Cost-based Approach for Fast Intrusion Detection - Propose a cost-based approach using decision tree model and neural networks. Experiments are carried out on benchmark dataset *NSL-KDD*. [pdf][code]
Encrypted File System - Implement a file system which allows users to store and share data through an untrusted server, using both RSA and AES encryption algorithms.[pdf][code][design]

SELECTED AWARDS

Outstanding Undergraduate Thesis Award, Fudan University July 2018
Honor Student in Top Talent Undergraduate Training Program, Fudan University Jun 2018
Outstanding Graduate Students of Fudan University May 2018
First Prize of Computer Science Outstanding Student Honor Program Scholarship, Fudan University Nov 2017

SKILLS

Programming Languages: Python, Matlab, C/C++, Java, Typescript **Libraries:** Tensorflow, Keras
TOEFL: 107 (R29 L30 S23 W25) **GRE:** 320 + 3.5 (V152 Q168 AW3.5)