YUTONG XIE

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Education

Shanghai Jiao Tong University *Sep. 2016 - Jun. 2020 (Expected)*
B.Sc. in Computer Science

- Member of **ACM Class**, an elite CS program for top 5% talented students.
- Member of **Zhiyuan Honors Program**, a pilot program for training outstanding students in the basic sciences.
- Major GPA 3.89/4.0 with core courses:
  Computer Vision (100, 1/64), Natural Language Processing (99, 1/21), Programming Practice (97), Scientific Computing (96), Mathematical Logic (96), Mathematical Analysis (A) (95), C++ Programming (A) (95), Machine Learning (94), Design and Analysis of Algorithms (93), Data Structure (93), Mathematics for the Information Age (93), Introduction to Probability (93), Operating System (93).

Research Interests

Interested in structural representation learning, e.g. **graph representation learning, natural language understanding (NLU)**; and also attracted by general machine learning problems, e.g. **multi-task learning (MTL), transfer learning (TL), learning to learn (LRL)**.

Research Experience

Foreseer Group, iSchool, University of Michigan *Jun. 2019 – Present*
Research Intern advised by Prof. Qiaozhu Mei

Apex Data & Knowledge Management Lab, SJTU *Jun. 2018 – Present*
Research Intern advised by Prof. Yong Yu and Prof. Weinan Zhang

Publications

Visual Rhythm Prediction with Feature-Aligned Network
Y. Xie, H. Wang, Y. Hao, Z. Xu

- Proceedings of the 16th IAPR International Conference on Machine Vision Applications Conference (MVA 2019).
- Course project of Computer Vision, advised by Prof. Cewu Lu.
- Proposed a data-driven visual rhythm prediction method, in which several visual features are considered (including frames and residuals, optical flow, scene change, body pose) and integrated by an end-to-end neural network to predict the visual onsets in a sequence labeling manner.
- Observed the mis-aligning phenomenon in feature streams, and elaborately designed a feature aligning layer to alleviate this problem.

QA4IE+: A Real-Time Document Level Information Extraction System
L. Qiu, D. Ru, Y. Xiao, **Y. Xie**, Q. Long, W. Zhang, K. Tu, Y. Yu

- Submitted to AAAI 2019.
- Aimed at implementing a system which can extract structured information from unstructured texts.
- The framework has been designed as a 4-stage pipeline which first recognizes named entity in articles and selects related relations from a knowledge base, then

extracts information with a question answering system, and finally generates reliable tuples by named entity linking.
- Responsible for the named entity recognition (NER) part, implemented a CNN-BiLSTM-CRF sequence labeling model.

Projects

A Compiler for Mx* *May. 2018 – Jun. 2018*
- Course project of Compiler Design and Implementation. [Github]
- Supported to compile a C-and-Java-like language Mx*.
- Optimized the compiler with register allocation, local value numbering, redundant instruction reducing, function inlining, etc.

A Deep Learning Framework *Jul. 2017 – Aug. 2017*
- Course project of Programming Practice. [GitHub]
- Supported automatic differentiation, Adam optimizer, Convolutional Neural Networks, dropout and other features.
- Supported TensorFlow-like interface and parallel computation on GPU.

Teaching Experience

CS420: Machine Learning, Teaching Assistant *Spring 2019*
CS120: Introduction to Computer Science, Head Teaching Assistant *Fall 2018*
CS151: C++ Programming (A), Teaching Assistant *Fall 2017*

Honors & Awards

Leo Ko-Guan Scholarship *2018–2019*
Huawei Scholarship (Top 2) *2017–2018*
Shanghai Jiao Tong University Scholarship *2017–2018*
Zhiyuan Honorary Scholarship *2016–2018*
Second Prize, ACM-ICPC 2016, Nha Trang *Dec. 2016*
Bronze Medal and Best Female Team, ACM-ICPC 2016, Beijing *Nov. 2016*
Silver Medal and Best Female Team, CCPC 2016, Hefei *Oct. 2016*
Bronze Medal, National Olympiad in Informatics (NOI) 2015 *May. 2015*
Bronze Medal, Asia-Pacific Informatics Olympiad (APIO) 2015 *May. 2015*
First Prize, National Olympiad in Informatics in Provinces (NOIP) 2014 *Dec. 2014*

Skills

Programming:
- Languages: C/C++, Python (PyTorch, TensorFlow, Numpy), Java, Matlab.
- Previous contestant of the International Collegiate Programming Contest (ACM-ICPC), familiar with advanced algorithms and data structures.

Communication:
- TOEFL: 101/120 (R28, L25, S22, W26).
- GRE: 322/340 (V153, Q169, W3.0)