# YUTONG XIE

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https://yutxie.github.io/aboutme/

#### 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.

### Research Interests

My reserch interests lie in structural representation learning, e.g. graph representation learning, natural language understanding; and I'm also attracted by general machine learning problems, e.g. multi-task learning, transfer learning, model capacity and generalization ability.

# Research Experience

Foreseer Group, iSchool, University of Michigan Research Intern advised by Prof. Qiaozhu Mei

Jun. 2019 - Present

Apex Data & Knowledge Management Lab, SJTU

Jun. 2018 – Present
Research Intern advised by Prof. Yong Yu and Prof. Weinan Zhang

# Research Projects

### Code Comprehension Graph for Algorithm Detection from Source Code

Y. Xie\*, T. Long\*, X. Chen, H. Zhao, W. Zhang, Q. Cao, Y. Yu

- Submitted to AAAI 2020.
- Aimed at identifying algorithms in programs.
- Proposed an effective program representation named code comprehension graph that consists of three subgraphs (data flow graph, control flow graph and abstract syntax tree) to capture both syntactic and semantic information.

#### 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.

#### 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.

# Highlighted Projects

### Simple Database

Apr. 2019 - Jun. 2019

- Course project of Database Management, advised by Prof. Feifei Li.
- Supported common database management system operations and transaction management mechanisms.

# Compiler for Mx\* [Github]

May. 2018 - Jun. 2018

- Course project of Compiler Design and Implementation.
- 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.

## Simple Deep Learning Framework [GitHub]

Jul. 2017 - Aug. 2017

- Course project of Programming Practice.
- Supported automatic differentiation, Adam optimizer, Convolutional Neural Networks, dropout and other features.
- Supported TensorFlow-like interface and parallel computation on GPU.

### Train Tickets Booking System [Github]

Apr. 2017 - May. 2017

- Course project of Data Structure.
- Led a small team to build a train tickets booking system which supports operations on users, trains, schemes and tickets with high efficiency.
- Developed the back-end data structures in C++, and the front-end GUI with Qt.

# 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

# Scholarships

Leo Ko-Guan Scholarship	2018, 2019
Huawei Scholarship	2017
Shanghai Jiao Tong University Scholarship	2017, 2018
Zhiyuan Honorary Scholarship	2016-2018

#### Competitions

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.

## English Proficiency:

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