

# Yuhao Zhang

Peking University, Beijing 100871, China  
zhang\_yuhao@pku.edu.cn • +86 18800122373 •

## EDUCATION

### Peking University, Beijing, China

- B.S. in Computer Science Sep 2015 – Present
  - Honor Track Curriculum: Introduction to Computing (A), Practice of Programming in C&C++, Data Structure and Algorithms(A), Algorithm Design and Analysis, Compiler Lab, Operating Systems (A), Lab. on Operating Systems, Computer Networks
  - Cumulative GPA: 3.68 / 4.00, Ranking: 25 / 207

## RESEARCH EXPERIENCE

### System Lab, Software Engineering Institute, Peking University

- Undergraduate Research Student May 2017 – Jul 2018
  - Project: An Empirical Study on Deep Learning Program Bugs
  - Supervisors: Prof. Yingfei Xiong and Prof. Shing-Chi (S.C.) Cheung
  - Focus: Software Testing and Debugging, Fault Localization, Deep Learning Programs

### Automated Software Engineering Group, University of Illinois Urbana-Champaign

- Undergraduate Research Intern Jul 2018 – Sep 2018
  - Project: Testing on Neural Networks
  - Supervisors: Prof. Tao Xie
  - Focus: Software Testing, Neural Networks, Adversarial Attack, Test Coverage

### Software Analytics Group, Microsoft Research Asia

- Undergraduate Research Intern Sep 2018 – Present
  - Project: Insights in Excel
  - Supervisors: Lead Researcher Han Shi and Associate Researcher II Xiao Lv
  - Focus: Machine Learning, Data Mining

## PUBLICATIONS

- Yuhao Zhang, Yifan Chen, Shing-Chi Cheung, Yingfei Xiong, and Lu Zhang, “An empirical study on TensorFlow program bugs” in *Proceedings of the 27th ACM SIGSOFT International Symposium on Software Testing and Analysis, ISSTA*, Amsterdam, The Netherlands, Jul 2018.
- Siwakorn Srisakaokul, Zexuan Zhong, Yuhao Zhang, Wei Yang, and Tao Xie, “MULDEF: Multi-model-based Defense Against Adversarial Examples for Neural Networks” on arXiv, Aug 2018.

## PROJECTS & EXPERIENCE

### Coursework Projects, School of Electronic Engineering and Computer Science (EECS) Peking University

- Software Analysis, **Parallel Detection in C for OpenACC** Sep 2016 – Jan 2017
  - To automatically add OpenACC statements into C codes for parallel acceleration, including a naive C parser and a static program analyzer.
  - I coded parts of the parser and the whole static program analyzer.
- Compiler Lab, **A Safe Memory-leak Fixing For C Programs** Feb 2017 – Jun 2017
  - To automatically detect and fix memory leaking in C programs, including a C parser (using Lex and Yacc to generate a CFG-graph) and a static program analyzer (Steensgaard pointer analysis and variable usage analysis) performing on a CFG-graph.
  - I coded parts of the parser and the whole static program analyzer.

### Extra Curricular Projects, Peking University

- Project: PKURUNNER Apr 2016 – Jan 2018
  - An application for recording running distance of students who take a P.E. class in one semester.
  - I programmed the code for recording the trace of running using map APIs (Android).
- Project: Peking University Course Scheduling System Sep 2017 – Mar 2018
  - To arrange the schedule for all courses in Peking University automatically. We converted the problem to a instance of graph coloring using course relationship extracted from the data of previous semesters using data mining, then we applied Tabu Search to solve it.
  - I programmed parts of the code for data cleaning and data mining and the whole process of converting the problem to a graph coloring problem.

### Teaching Assistant, Peking University

- Algorithm Design and Analysis Feb 2018 – Jun 2018

## AWARDS & SCHOLARSHIPS

- Gold, ACM-ICPC, Hefei Regional, China Oct 2015
- iPinYou Scholarship, EECS Department, Peking University 2016
  - For outstanding performance in the academic year of 2015-2016.

- Award for Scientific Research, Peking University 2016
  - For outstanding performance in the academic year of 2015-2016.
- Gold, ACM-ICPC, Dalian Regional, China Oct 2016
- Seventh Place, ACM-ICPC, Yangon Regional, Myanmar Dec 2016
- Schlumberger Scholarship, EECS Department, Peking University 2017
  - For outstanding performance in the academic year of 2016-2017.
- Merit Student, Peking University 2017
  - For outstanding performance in the academic year of 2016-2017.
- Gold, ACM-ICPC, Xian Regional, China Oct 2017
- Fourth Place, ACM-ICPC, Ho Chi Ming City Regional, Vietnam Dec 2017
- Suzhou Industrial Park Scholarship, Peking University 2018
  - For outstanding performance in the academic year of 2017-2018.
- Merit Student, Peking University 2018
  - For outstanding performance in the academic year of 2017-2018.

#### LANGUAGES

- Chinese: Native language.
- English: Fluent.
  - TOEFL: 107 (R30 + L30 + S22 + W25).
  - GRE: Verbal 157 + Quantitative 170 + Writing 4.0

#### SKILLS

C, C++, C#, Python, Java, Scheme, Ocaml,  $\text{T}_{\text{E}}\text{X}$ ,  $\text{L}_{\text{A}}\text{T}_{\text{E}}\text{X}$ ,  $\text{X}_{\text{E}}\text{L}_{\text{A}}\text{T}_{\text{E}}\text{X}$ , MATLAB, Tensorflow