

HAORAN MA

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EDUCATION

University of California, Los Angeles

PhD student in Computer Science

Los Angeles, US

September 2019 – Present

University of Oxford

Visiting Student at New College

Oxford, UK

October 2017 – June 2018

- **GPA:** 4.0/4.0
- **Excellent End of Term Report**

Tsinghua University

Bachelor of Engineering in Computer Science and Technology

Beijing, China

August 2015 – July 2019

- **GPA:** 3.84/4.0
- **Tsinghua University Excellent Undergraduate** (63 out of 3186)

RESEARCH EXPERIENCE

Tsinghua University (Department of Computer Science and Technology)

Research Assistant to Professor Xiaoying Bai

Beijing, China

April 2017 – June 2018

API Modeling and Scenario-based Testing

- Extended OpenAPI with scenario model specification.
- Proposed and implemented several test data generation algorithms based on our extended specification.
- Implemented a prototype tool to support the automatic pipeline process of model construction, analysis, test generation and execution.
- Experiments on open APIs of Alibaba Cloud Services showed that our system can effectively generate diversified test cases with adequate coverage. It has detected several bugs that were then officially confirmed in Alibaba Cloud.
- The specification was chosen as the only common API specification in an ongoing project funded by State Key Research and Development Plan and the toolchain has been deployed currently for project integrated testing.

Tsinghua University (Department of Computer Science and Technology)

Research Assistant to Professor Xiaoying Bai

Beijing, China

February 2016 – March 2017

Distributed Web API Testing System

- Gathered semi-structured API specifications from the websites using web crawlers and translated them into XML/YAML-encoded standard representations.
- Built test generators to derive test scripts from the specifications and scenarios.
- Constructed a prototype system, called ATCloud, to illustrate the process of API understanding, test scenario modeling, cloud-based test resources management, distributed workload simulation, and performance monitoring.

PUBLICATIONS

- [1] Wang, J., Bai, X., **Ma, H.**, Li, L., Ji, Z. (2017, March). Cloud API Testing. In *Software Testing, Verification and Validation Workshops (ICSTW), 2017 IEEE International Conference on* (pp. 385-386). IEEE.
- [2] Wang, J., Bai, X., Li, L., Ji, Z., **Ma, H.** (2017, July). A Model-Based Framework For Cloud API Testing. In *Computer Software and Applications Conference (COMPSAC), 2017 IEEE 41st Annual* (Vol. 2, pp. 60-65). IEEE.

AWARDS AND HONORS

- Tsinghua University Excellent Undergraduate, Class of 2019 (**Top 63/3186**) 2019
- Yinghua Scholars Program (**Top 8/3300**) 2017
- Jiangnanxiang Scholarship (**Top 1/157**) 2017
- Tanglixin Scholarship (**Top 16/3300**) 2017
- Qualcomm Scholarship 2017
- CCF Elite Collegiate Award (Awarded by China Computer Federation) 2017
- SenseTime Scholarship 2017
- Annual Comprehensive Excellent Award (**Top 8/157**) 2016-2018
- China National Scholarship (**Top 5/147**) 2016
- Silver Award in China Collegiate Programming Contest 2016
- Third Prize in Business Plan Competition in Global Business Leadership Program 2016
- Third Prize in Group A of Non-physics Major in National Collegiate Physics Competition 2016
- Freshman Scholarship 2015
- Gold Award in National Olympiad in Informatics 2014
- Gold Award in Asia-Pacific Informatics Olympiad 2014
- Silver Award in China Team Selection Competition 2014

TEACHING EXPERIENCE

High School Tutor in Data Structures and Algorithms

September 2014 – August 2017

- ~150 hours of teaching experience.

SKILLS AND INTERESTS

- **Extracurricular Activities:** Member of Photography Society in both Tsinghua University and the University of Oxford; Published a book *The Road Should Be Flat* in 2016.
- **Programming Skills:**
 - Programming Languages: C++, C, Python, Java, Haskell, OCaml, OWL, Matlab, JavaScript, SQL, PHP.
 - Packages: Tensorflow, NumPy, WebGL, Three.js, Qt, Django, JFinal.
- **Languages:** Mandarin Chinese (native), English (fluent).