

(Sherilyn) Shiyin WANG

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Computer Science Undergraduate in Tsinghua Yao Class 2020

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RESEARCH EXPERIENCE

Biological Network Analysis 🌐

Advisor: Russ B. Altman, Helix Group in Stanford University

📅 Jul 2019 – Aug 2019 📍 CA, USA

- Reviewed the usage of protein-protein interaction networks from a biologists' perspective
- Also worked on drug synergy prediction by few-shot learning approach

Disentangle Private Information from Edge-Cloud Training 🌐

Advisor: Song Han, HanLab, Massachusetts Institute of Technology(MIT)

📅 Feb 2019 – May 2019 📍 MA, USA

- Designed a differential privacy guaranteed framework for edge-cloud training with theory
- Analyzed the trade-off between performance and privacy

Complementary Learning for Named Entity Recognition 🌐

Advisor: Jiawei Han, Data Mining Group, University of Illinois at Urbana-Champaign(UIUC)

📅 July 2018 - Sep 2018 📍 IL, USA

- Named entity recognition on biological domain aggregating partially labeled datasets
- Helped to improve the Set Search+ Oxygen demo for KDD 2018

Fast Top-k Area Topics Extraction with Knowledge Base

Advisor: Jie Tang, Data Engineering Group, Tsinghua University

📅 Jun 2017 – Sep 2017 📍 Beijing, China

- Proc. IEEE DSC 2018 (<https://arxiv.org/abs/1710.04822>)
- Crawled data from Wikipedia and modeled relationships between categories
- Proposed a method to solve inaccurate data source problem innovatively

PROJECT EXPERIENCE

Computational Analysis of Chinese Government Reports

Advisor: Xiao Tang, School of Public Policy and Management, Tsinghua University

📅 Sep 2018 – Jan 2019 📍 Beijing, China

- Crawled and constructed a dataset of 13148 government annual reports
- Mined, constructed, and validated a hierarchical structural organization of the reports
- Refined LDA model to extract topics from texts and improved the algorithm efficiency

Restaurant Management Application 🌐

Database Course Project in Tsinghua University

📅 Nov 2018 – Dec 2018 📍 Beijing, China

- Full-stack web application: HTML/CSS + Python Flask + Oracle

Emergency Room Efficiency, Effectiveness, and Accessibility 🌐

MIT Policy Hackathon Organized by MIT IDSS

📅 Apr 2019 📍 MA, USA

- Emergency room policy design based on provided data in 24 hours as the group leader
- Responsible for data analysis, data visualization, modeling, and report formatting

Werewolf Game Software

Object-Oriented Programming Course Project in Tsinghua University

📅 May 2017 – Jun 2017 📍 Beijing, China

- Multi-user desktop application through TCP protocol for the "Werewolf" game
- Contributed to all the GUI part and client logic part

EDUCATION

Bachelor in Computer Science

Tsinghua University

📅 Aug 2016 – Jul 2020

(Yao Class) 39 students advised by Turing Award Laureate Prof. Andrew Chi-Chih Yao, the best Chinese Computer Science undergraduate program

Core Courses: Linear Algebra, Data Structure, AI, Database, Numeric Ana., Comp. Bio., Rand. Net. Opt., Advanced Net. Secu., Quan. Econ., Game Theory, Comp. Urban System Regulation

Overall GPA: 3.65/4.00 (163 credits)

Minor in Statistics

Tsinghua University

📅 Sep 2017 – Jul 2020

Core Courses: Stat. Inference, Multivariate Stat. Ana., Intro. to Data Science, Bayes. Theory

Special Student Program

Massachusetts Institute of Technology(MIT)

📅 Feb 2019 - May 2019

Courses: 6.437 Inference and Information (Graduate Level), 6.802 Comp. Bio., 6.045 Automata, Computability, and Complexity, 6.100 EECS Research Project

Overall GPA: 5.0/5.0 (48 units)

AWARDS

Global Competence Fellow 2019 - 2020

🎓 Tsinghua

First-tier fellowship to 20 elites interested in global issues with adequate knowledge and negotiation skills.

Stanford UGVR Scholar 2019

🎓 Stanford & Tsinghua

About \$11,600 sponsorship for summer research internship in Bioengineering Department. Only 18 scholars per year are admitted from China.

Xuetang Scholarship 2016 - 2020

🎓 Tsinghua

Annual 6,000 CNY to each Yao Class students.

Baidu Scholarship 2017 & 2018

🎓 Tsinghua & Baidu

Scholarship for all-round development and comprehensive excellence.

TopOpen Research Funding 2018

🎓 Tsinghua

30,000 CNY research funding at UIUC in 2018.

Mathematical Contest in Modeling Meritorious Winner 2017 🎓 COMAP

Use circuit theories and software to model and optimize the traffic flow in Seattle innovatively.

WORK EXPERIENCE

Community Development Officer

Common Future Fund

Apr 2017 - May 2018 Beijing, China

- Organized exhibitions, reading groups, online classes, and social media accounts
- To raise public awareness, gain social impact, and seek donations

Interpreter

IP Group

Sep 2018 & Oct 2019 Hong Kong & Shanghai & Beijing, China

- IP Group Deep Tech Forum
- Worked as conference assistant for the CEOs of British startups

Teaching Assistant for "Algorithmic Economics"

Institute for Interdisciplinary Information Sciences, Tsinghua University

Sep 2019 - Jan 2020 Beijing, China

- Responsible for the data profiling introduction
- Statistics consultant for the course projects

LEADERSHIP AND ACTIVITIES

BRICS Youth Forum Delegate

All-China Youth Federation

Aug 2017 Beijing, China

- The highest level of youth official diplomatic event
- Negotiated proposal that was submitted to the BRICS Leaders Xiamen Summit

Field Study in Guiyang about Poverty and Big Data Industry

Guizhou-Cloud Big Data

Feb 2018 Guizhou, China

- Interviewed government leaders and investigated the rural areas and big data industry
- Wrote a report to the the director of the Guizhou Big Data Development Administration

Global South Culture Immersion Program Egypt

The American University in Cairo

Jan 2018 - Feb 2018 New Cairo, Egypt

- Studies two weeks in the American University in Cairo and visited historical sites
- Wrote a report about the Islamization of Egypt in the sixth century

Sea Turtle Protection Volunteer

World Without Borders

Aug 2017 Galle, Sri Lanka

- Sea turtle protection volunteer in Galle, Sri Lanka
- Field trip around the island about the colonial history

Student Union

Design Group, CS Department, Tsinghua

Sep 2017 - Dec 2018 Beijing, China

- Designed posters for student activity
- Designed stage background for 2017 Computer Science Students Festival

LIFE PHILOSOPHY

"The future is today."

STRENGTHS

Bioinformatics

Data Mining

Database

Statistics

Machine Learning

International Relations

Communication

Global Perspective

Leadership


LANGUAGES

English


Chinese

Español

SKILLS

 **Data Massive**


As a Computer Science student with a Statistics minor, I can apply models in large scale data with efficient algorithms. Besides the accuracy of algorithms, I am also concerned with the efficiency.

 **Coding**

I am enrolled in Tsinghua Yao Class and won scholarships each year. I am familiar with Python, R, and C++. I am also passionate to learn new programming languages.

 **Open-Minded and Global Experiences**

Instead of just sight-seeing, I talked to the local people around the world. I have been to Nepal, Sri Lanka, Egypt, USA, Singapore, and Turkey during my undergraduate program. I did field study in Guizhou about poverty and big data. Activities like BRICS Youth Forum and IMUSE have provided me a broad view of the global affairs.

 **Communication**

I am a good communicator. I have participated in many international activities, such as international visitor receptions, GSF, IMUSE. During my exchange at MIT, I am active in local events. I took part in BRICS Youth Forum as a Chinese delegate, which gave me the chance to communicate with elites from other BRICS countries. I am learning Spanish now.