

ZHENBANG WU

718 East Haizhou Road, Haining, 314400, China

zw12@illinois.edu ◊ <http://zzachw.github.io>

EDUCATION

Zhejiang University

Bachelor of Engineering in Electronics and Computer Engineering
GPA: 3.93/4.0 (Total Enrolled Units: 68)

Haining, CN

Expected Jun. 2020

University of Illinois at Urbana-Champaign

Bachelor of Science in Computer Engineering
GPA: 3.94/4.0 (Total Enrolled Units: 61)

Urbana, US

Expected May 2020

University of California, Los Angeles

Cross-disciplinary Scholars in Science and Technology (CSST) Program
GPA: 4.0/4.0 (Total Enrolled Units: 12)

Los Angeles, US

Jun. - Sep. 2019

RESEARCH EXPERIENCES

Research Assistant, University of California, Los Angeles

Jun. 2019 - Present

Advisor: [Prof. Yizhou Sun](#)

1. *Chemical Property Prediction via Graph Knowledge Transfer*

2. *Learning to Transfer via Modelling Multi-level Task Dependency*

- Proposed to transfer knowledge across tasks to improve the label efficiency
- Utilized the aligned hyper-graph to decide **how** knowledge should be transferred, and the general and fine-grained task dependency structures to decide **what** knowledge should be transferred
- Received UCLA-CSST Outstanding Research and Presentation Skills Award (Top 10%) [[Certificate](#)]
- One paper in submission (co-first author)

Image Processing Algorithm Intern, [Leadmove Technology \(Shanghai\)](#)

Jun. - Aug. 2018

Mentor: [Dr. Laiye Bi](#)

Development of AI Front-view Advanced Driver Assistance System (ADAS)

- Developed an image post-processing system, which integrated distortion correction, (inverse) perspective mapping, position detection, and speed measurement
- Developed a camera calibration system based on Optical Flow and Newton's Method
- Improved the accuracy and efficiency of online camera calibration compared to existing methods

Research Assistant, ZJU-UIUC Institute

May 2018 - May 2019

Advisor: [Prof. Chushan Li](#)

Development of Smart Power Outlet for Plug-in Electric Vehicles

- Developed a smart power outlet with functionalities such as charging measurement, circuit breaker, and cloud communication
- Utilized Internet of Things (IoT) module to collect real user data for analysis

SELECTED PROJECTS

Applied Parallel Computing

Spring 2019

ZJU-UIUC Institute

Haining, CN

CUDA Accelerated Mitosis Detection, <https://github.com/zzachw/Mitosis-Detection-with-Transfer-Learning>

Advisor: [Prof. Steven Lumetta](#)

- Designed a Convolutional Neural Network (CNN) to detect mitosis cells
- Optimized the CUDA implementation of CNN with fast matrix multiplication algorithm

- Accelerated the inference speed by 181% compared to existing CUDA implementation

Computer Systems Engineering

University of Illinois at Urbana-Champaign

Linux System Design, <https://github.com/zzachw/Linus-System-Design>

Advisor: Prof. Zbigniew Kalbarczyk and Prof. Jian Huang

- Developed the core of an operating system from scratch
- Realized several advanced functionalities such as graphical terminal, Chinese Pinyin input method editor, drivers (sound, mouse, tux), ACPI power-off and reboot, and CMOS date time
- Ranked No. 1 among 54 groups in the design competition [Certifcate]

Fall 2018
Urbana, US

PUBLICATIONS & PRESENTATIONS

1. Haonan Wang*, **Zhenbang Wu***, Ziniu Hu, Yizhou Sun, "Learning to Transfer via Modelling Multi-level Task Dependency", **Under Review**
2. **Invited Presentation** "Chemical Property Prediction via Graph Knowledge Transfer" at UCLA Cross-disciplinary Scholars in Science and Technology (CSST) Program, Los Angeles, US, Sep. 2019 (Top 12 Out of 97 Projects)

* indicates equal contribution

TEACHING EXPERIENCES

Teaching Assistant, ECE220 Computer Systems & Programming, ZJU-UIUC Institute Fall 2019
Instructor: Prof. Zicheng Liao

Teaching Assistant, CS225 Data Structure, ZJU-UIUC Institute Spring 2019
Instructor: Prof. Volodymyr Kindratenko

Teaching assistant's duty includes leading the discussion/lab sessions, holding the office hour, answering questions on Piazza, grading the homework/exams, and giving a few lectures on behalf of the professors

SELECTED HONORS & AWARDS

National Scholarship (Highest Award Given by the Chinese Government)	ZJU, 2019
Zhejiang University Scholarship - First Prize (Top 3%)	ZJU, 2019
CSST Outstanding Research and Presentation Skills Award (Top 10%)	UCLA, 2019
CSST Scholarship (Acceptance Rate < 10%)	UCLA, 2019
Dean's List	UIUC, 2019
First Place, Computer Systems Engineering Design Competition (Top 1/54 groups)	UIUC, 2018
Zhejiang University Scholarship - Second Prize	ZJU, 2018
Second-Class Academic Excellence Scholarship	ZJU-UIUC Institute, 2018
Zhejiang University Scholarship - Third Prize	ZJU, 2017
First-Class Academic Excellence Scholarship	ZJU-UIUC Institute, 2017

TEAMWORK EXPERIENCES

President of Student Union of Intl. Campus, Zhejiang University May 2017 - May 2019
Teaching Volunteer in Rural China Jun. 2017

STANDARD TEST

TOEFL: 109 (Reading: 29, Listening: 30, Speaking: 25, Writing: 25)

GRE: 329 (Verbal Reasoning: 159, Quantitative Reasoning: 170) + 3.5 (Analytical Writing)