# ZHENBANG WU

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## EDUCATION

**Zhejiang University/University of Illinois at Urbana-Champaign Institute**  Haining, CN
Dual Bachelor's Degrees in Computer Engineering from ZJU and UIUC  *Sept. 2016 to May 2020*
GPA: 3.79/4.0 (Overall), 3.94/4.0 (Major)
**Highlighted Courses:** Applied Parallel Programming (A), Probability (A), Data Structures (A+),
Computer Systems & Programming (A+), Introduction to Computing(A+).

**University of Illinois at Urbana-Champaign**  Urbana, US
Visiting Student  *Aug. to Dec., 2018*
GPA: 4.0/4.0 (Total Enrolled Units: 17)
**Highlighted Courses:** Introduction to Data Mining (A), Applied Machine Learning (A), Algorithms
and Models of Comp. (A), Computer Systems Engineering (A+).

**University of California, Los Angeles**  Los Angeles, US
Cross-disciplinary Scholars in Science and Technology (CSST) Program  *June to Sept., 2019*
GPA: 4.0/4.0 (Total Enrolled Units: 12)
**Highlighted Courses:** Directed Research (A).

## RESEARCH EXPERIENCES

**Research Assistant**, University of California, Los Angeles  *June to Sept., 2019*
Advisor: Prof. Yizhou Sun
*Learning to Transfer via Modeling Multi-level Task Dependency*
○ Constructed attention based tasks dependency relationships in general level and data-specific level;
○ Utilized the learned tasks dependency relationship to guide what knowledge should be transferred;
○ Outperformed SOTA multi-task learning methods on structured data (graph and text);
○ Received UCLA-CSST Outstanding Research and Presentation Skills Award (Top 10%).

**Image Processing Algorithm Intern**, Leadrive Technology (Shanghai)  *June to Aug., 2018*
Mentor: Dr. Laiye Bi and Dr. Longtao Yuan
*Development of AI Front-view Advanced Driver Assistance System (ADAS)*
○ Independently designed an image post-processing system, which integrated distortion correction, (inverse) perspective mapping, position detection, speed measurement, etc;
○ Independently designed 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 to May 2019*
Advisor: Prof. Chushan Li
*Development of Smart Power Outlet for Plug-in Electric Vehicles*
○ Realized functionalities such as charging measurement, circuit breaker, cloud communication, etc.;
○ Utilized Internet of Things (IoT) module to collect real user data for analysis.

## SELECTED COURSE PROJECTS

**ECE408 Applied Parallel Computing**, Final Project  *Spring 2019*
**ZJU-UIUC Institute**  Haining, CN
*GPU Accelerated Mitosis Cell Detection*
Advisor: Prof. Steven Lumetta

- Utilized SOTA Convolutional Neural Network (CNN) to detect mitosis cell;
- Optimized the CUDA implementation of CNN with novel fast matrix multiplication algorithm;
- Accelerated the forward propagation of CNN by 181% compared to existing CUDA implementation.

**ECE391 Computer Systems Engineering**, Design Competition          *Fall 2018*
**University of Illinois at Urbana-Champaign**          Urbana, US
*Linux System Design*
Advisor: Prof. Zbigniew Kalbarczyk and Prof. Jian Huang
- Developed the core of an operating system from scratch;
- Realized several basic functionalities such as system calls, scheduling, file system etc.;
- Added 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.

## PUBLICATIONS & PRESENTATIONS

1. Haonan Wang[*], **Zhenbang Wu**[*], Ziniu Hu, Yizhou Sun, *"Learning to Transfer via Modeling Multi-level Task Dependency"*, **unpublished,** under review at The Eighth International Conference on Learning Representations (**ICLR'20**).
2. *"Chemical Property Prediction via Graph Knowledge Transfer"*, Invited Presentation at UCLA-CSST Final Presentation, Los Angeles, US, Sept. 2019.

*\* indicates equal contribution.*

## TEACHING EXPERIENCES

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

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

## SELECTED HONORS & AWARDS

- **National Scholarship** (Top 2%), Ministry of Education of the P.R. China, *2019*
- **Zhejiang University Scholarship - First Prize** (Top 3%), ZJU, *2019*
- **CSST Outstanding Research and Presentation Skills Award** (Top 10%), UCLA, *2019*
- **CSST Scholarship** (USD $5,343), UCLA, *2019*
- **Dean's List**, UIUC, *2019*
- **Outstanding Student Award**, ZJU, *2017 & 2018 & 2019*
- **Zhejiang University Scholarship - Second Prize** (Top 8%), ZJU, *2018*
- **Second-Class Academic Excellence Scholarship**, ZJU-UIUC Institute, *2018*
- **First Place** in ECE391 Computer Systems Engineering Design Competition (1/54), UIUC, *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 to May 2019*

**Teaching Volunteer in Rural China**          *June 2017*

**Volunteer at 120th Anniversary of Zhejiang University**          *May 2017*