ZHUOHAO ZHANG

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EDUCATION

University of Illinois at Urbana-Champaign — Urbana-Champaign, USA
M.S. in Computer Science — Aug. 2019 – May. 2021 (Expected)

- GPA: Unavailable
- Advisor: Prof. Ranjitha Kumar at Data Driven Design Group

Zhejiang University — Hangzhou, China
B.Eng. in Computer Science and Technology (**with Honors**) — Sept. 2015 – Jun. 2019

- GPA: 3.88/4.00, major GPA: 3.93/4.00 (ranked **top 5%** of 181 students)
- 3 Successive Years of **First-Class Scholarship**
- UC Davis, Research Assistant; Cornell Tech, Visiting Scholar

PUBLICATIONS

1. **Zhuohao Zhang**, Xiyuan He*. *GPK: An Efficient Special Symbol Input Method for Keyboards Using Glide*. In Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems (CHI 2019), Extended Abstract
2. Lei Shi, Holly M. Lawson, **Zhuohao Zhang**, Shiri Azenkot. *Designing interactive 3D printed models with Teachers of the Visually Impaired.* In Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems (CHI 2019)
3. Lei Shi, **Zhuohao Zhang**, Shiri Azenkot. *A Demo of Talkit++: Interacting with 3D Printed Models Using iOS Devices*. In Proceedings of the 20th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '18)

* indicates equal contribution as first author.

RESEARCH EXPERIENCE & PROJECTS

University of Illinois at Urbana-Champaign (Data Driven Design Group) — Urbana-Champaign, USA
Research Assistant to Prof. Ranjitha Kumar — Aug. 2019 – Now
Understanding the Efficiency of Emoji Sequences Using Information Theory

- Developing an iOS application "Opico" released in App Store, a social media mobile app that allows users to create and share reactions through Emoji
- Use information theory to extract information encoded in emoji sequences and empirically measure properties from emoji information channel

Cornell University (Enhancing Ability Lab, Cornell Tech) — New York City, USA
Research Assistant to Prof. Shiri Azenkot — Oct. 2017 – Dec. 2018
Design Interactions for 3D Printed Models for Blind People

- Designed an iOS application "Talkit++" to support 3D model augmentation and voice user interface for people with visual impairments, which had been deployed in use at several special education schools. Project has been released at https://www.interactiveprintedmodels.com/
- Used OpenCV based algorithms to detect 3D models and hand gestures; Used native iOS to support speech recognition and text-to-speech; Based on the model's position and the user's input, Talkit++ speaks textual information, plays audio recordings, and displays visual animations for blind people

Zhejiang University (CAD&CG State Key Lab) — Hangzhou, China
Research Assistant to Prof. Yingcai Wu, Director of Vis Group — Apr. 2017 – Apr. 2018
Augmented Reality-based Collaborative Visual Analytics System

- Registered as Provincial Undergraduate Training Program for Innovation and Entrepreneurship
- Designed a VR application in HTC Vive using 3D data of housing in Manhattan, which supports visual data analytics and scalable interactions
- Used space partition, cluster analysis and data visualization techniques to preprocess 3D data points, and enabled immersive wandering experiences in a city-level

Zhejiang University (Dept. of Computer Science) Hangzhou, China
Research Assistant to Prof. Qingsong Shi, Director of Architecture Lab Sept. 2016 – Jun. 2018
CPU and Operating System Design from Scratch on Hardware

- Designed CPU and hardware system including Single-Cycle, Multi-Cycle, Pipeline CPU, and System-on-Chips
- Further implemented applications like 2D games and mini-shell based on the designed CPU
- Contributed to an operating system and some basic applications built from scratch on hardware

TALK

Tactile Graphics in Education and Career Symposium Baltimore, USA
Presenter at National Federation of the Blind, Jernigan Institute 11th Oct. 2018 – 12th Oct. 2018

- Presented with Ph.D. Lei Shi from Cornell University
- Title: Sensables: 3D Printed Models for Visually Impaired Students

COURSEWORK (COMPLETION & IN PROGRESS)

Artificial Intelligence & Big Data: Introduction to Artificial Intelligence, Database Systems, Introduction to Data Mining, Human-computer Interaction for Machine Learning, Data Science

Algorithms and Programming: Advanced Data Structures and Algorithm Analysis, Optimization Algorithms, Programming Principle, Java Application Design, B/S Software Design

Computer System and Network: Application of Wireless Network, Digital Logic Design, Computer Organization, Computer Architecture, Operation System, Computer Hardware System Based Practice, Information Security

Mathematics and Statistics: Discrete Mathematics, Linear Algebra, Probability and Mathematical Statistics, Computational Methods

Interdisciplinary Computer Science: Computer Graphics, Information Visualization, Design Thinking

WORK EXPERIENCE

University of Illinois at Urbana-Champaign, Dept. of Computer Science Urbana-Champaign, USA
Teaching Assistant for *CS 107, Data Science Discovery* Aug. 2019 – Now

Zhejiang University, Dept. of Computer Science and Technology Hangzhou, China
Teaching Assistant for several computer science courses on hardware Sept. 2017 – Jun. 2018

Zhejiang University, Dept. of Computer Science and Technology Hangzhou, China
Teaching Assistant for *Introduction to Computer Systems* Jul. 2017

SELECTED AWARDS AND HONORS

- First-class Scholarship for Academic Excellence (top 3% in ~850 students) 2016
- The Outstanding Student Title (top 3% in ~850 students) 2016
- Zhejiang Provincial Government Scholarship 2016
- First-class Scholarship, awarded for excellent performance in basic subjects (top 5%) 2017&2018
- Second and Third-class Scholarship for Academic Excellence 2017&2018
- ACM CHI Student Research Competition, Second Prize 2019

ADDITIONAL INFORMATION

Academic Services

- Reviewing: CHI 2019 Late Breaking Work

Interests

- 2 years of experience in designing public posters and advertisement banners
- 12 years of experience in Chinese Calligraphy, won 1st Prize of 1st National Calligraphy Competition

Computer and Language Skills

- iOS, AR frameworks, Unity, C/C++, Java, Python, JavaScript, HTML, CSS, D3.js, SQL, VHDL
- Machine Learning, Information Retrieval, Human-centered AI, Optimization
- TOEFL 107 (Speaking 26/30, Writing 30/30) IELTS 8.0 (Writing 8.0/9)