

EDUCATION

- **University of Minnesota** Minneapolis, MN, U.S.
Ph.D in Computer Science *Sept. 2019 – present*
 - Major Orientation: Human-Computer Interaction, Social Computing, VR/AR
 - Advisor: *Prof. Lana Yarosh* at GroupLens Lab
- **University of Chinese Academy of Sciences** Beijing, China
M.Sc. in Computer Science; Rank: Top 10% *Sept. 2016 – Jun. 2019*
 - Major Orientation: Human-Computer Interaction
 - Advisor: *Prof. Danli Wang* at the State Key Laboratory of Management and Control for Complex Systems, Institute of Automation, Chinese Academy of Sciences
 - Awards: National Scholarship, Outstanding Student Award
- **Shandong University** Jinan, Shandong, China
B.Eng. in Software Engineering; Rank: Top 5% *Sept. 2012 – Jul. 2016*
 - Awards: Chinese Computer Federation (CCF) Outstanding Undergraduate Award, Outstanding Graduate Award, Dean Scholarship, The First Prize Scholarship

PUBLICATIONS

1. **Qiao Jin**, Yu Liu, Ye Yuan, Svetlana Yarosh, Evan Suma Rosenberg. VWorld: an Immersive VR System for Learning Programming (LBW). In the 2020 ACM Conference on Human Factors in Computing Systems (CHI'20). Under Review.
2. Ze Li, Tingting Wang, **Qiao Jin**. Training Manual for Computational Thinking (Book). Beijing, China Youth Publishing House, Jan. 2020.
3. Saba Kawas, Ye Yuan, Akeiyah DeWitt, **Qiao Jin**, Susanne Kirchner, Abigail Bilger, Ethan Grantham, Julie A. Kientz, Andrea Tartaro, Svetlana Yarosh. Another Decade of IDC Research: Examining and Reflecting on Values and Ethics (Full Paper). In the 2020 ACM Interaction Design and Children Conference (IDC'20). Under Review.
4. **Qiao Jin**, Danli Wang. MazeRobot: A Tangible Embedded System to Help Children Learn Programming (Full Paper). The 15th CCF Conference on China Human-Computer Interaction (CHCI'19).
5. Xiaozhou Deng, Danli Wang, **Qiao Jin**. CoProStory: A Tangible Programming System for Children's Collaboration (Full Paper). In the 13th International Conference on Computer Supported Collaborative (CSCL'19).
6. Xiaozhou Deng, Danli Wang, **Qiao Jin**, Fang Sun. ARCat: A tangible programming tool for DFS algorithm teaching (WIP). In the 2019 ACM Interaction Design and Children Conference (IDC'19).
7. **Qiao Jin**, Danli Wang, Xiaozhou Deng, Nan Zheng, Steve Chiu. AR-Maze: A Tangible Programming Tool for Children Based on AR Technology (WIP). In the 2018 ACM Interaction Design and Children Conference (IDC'18).
8. **Qiao Jin**, Danli Wang, Fang Sun. TanCreator: A Tangible Tool for Children to Create Augmented Reality Games (Poster). In the 2018 ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp'18).
9. Xiaozhou Deng, Danli Wang, **Qiao Jin**. TLogic: A Tangible Programming Tool to Help Children Solve Problems (Full Paper). In the 12th International Conference on E-Learning and Games (Edutainment'18).

PATENTS

1. Danli Wang, **Qiao Jin**, Xiaozhou Deng, A Tangible Programming Tool Based on AR Technology, 2017.12.18, China, 201711381394X
2. Danli Wang, Xiaozhou Deng, **Qiao Jin**, A Tangible Programming System for Children's Collaboration, 2017.12.18, China, 2017113813653

RESEARCH EXPERIENCE

- **Pain Alleviation Through Social Virtual Reality** Minneapolis, MN, US
Virtual Reality (VR), Unity3D *Oct. 2019 - Present*
 - Designed and assisted to implement a VR pain alleviation system that includes social competition and social collaboration elements.
 - Conducted a study of comparing perceived pain in control, VR, and social VR conditions.
 - The resulting paper is in preparation as the first author.
- **VWorld: an Immersive VR System for Learning Programming** Minneapolis, MN, US
VR, Unity3D, C# *Oct. 2019 - Dec. 2019*
 - Led the research group to design and implement an VR-based programming system on Oculus Quest, which is leveraging VR technology to provide an immersive programming learning experience and allowing children to customize their learning environment and process.
 - Realized two 3D interaction techniques in VR environment: world-in-miniture and symmetric bimanual interaction.
 - The resulting paper have been submitted in CHI'20 as the first author.
- **Training Manual for Computational Thinking** Beijing, China
Scratch, Python *Mar. 2019 - Sept. 2019*
 - Classified and organized the elements in computing thinking (CT), and explained it from two dimensions of CT in life and CT in program, with graphic programming cases and python cases attached.
 - The resulting book was published by China Youth Publishing House as the third author.
- **A Comparative Study of Virtual and Traditional Training** Beijing, China
VR, Physiological Signals, Python *Jan. 2019 - Jun. 2019*
 - Evaluated and analyzed the subjective and objective data based on physiological signals including ECG and EMG of the billiards training both in virtual environment and real environment.
 - Developed a VR billiards game in the Oculus Rift with Unity3D.
- **AR-Maze: A Tangible Programming Tool Based on AR Technology** Beijing, China
Augmented Reality (AR), Unity3D, C#, Mobile *Oct. 2017 - Sept. 2018*
 - Led the research group to design and implement a new tangible programming system which integrals AR-based real-time feedback, being inexpensive, which efficiently makes up the limitation of the current feedback system only relying on physical interface.
 - Conducted the user study regarding children behaviors in AR environment with 20 primary school students.
 - Worked in process paper was published in IDC'18 as the first author.
- **CoProStory: A Tangible Programming System for Children's Collaboration** Beijing, China
IoT, Unity3D, C#, Sensors, Single Chip, Radio Frequency Identification (RFID) *Mar. 2018 - Nov. 2018*
 - Designed and implemented a collaborative system that allows two children to program their own characters, accomplishing their tasks with tangible blocks in parallel. With clear role division, conflicts could be well reduced.
 - Conducted the user study regarding the decomposition strategy with 24 primary school students.
 - Full paper was published in CSCL'19 as the third author.
- **TanCreator: A Tangible Tool for Children to Create Augmented Reality Games** Beijing, China
AR, Internet of Things (IoT), Unity3D, C#, Mobile *Mar. 2018 - Jun. 2018*
 - Designed and implemented a system, in which applied AR technology to render paper tokens and displayed virtual movement controlled by hardware system. This system help children create virtual game of a physical form and play by hand movements.
 - Poster Paper was published in UbiComp'18 as the first author.
- **MazeRobot - A Tangible System for Children Learning Problem Decomposition** Beijing, China
Embedded System, Robot, Sensors, C++, Arduino *Jan. 2017 - Oct. 2017*

- Designed and implemented the algorithm of robot car command loading, through which children could split the whole path into several pieces and program respectively. Integrated Thin Film Transistor (TFT) screen to visualize the road-map and recall the programmed commands.
- Conducted the user study regarding their decomposition strategy with 24 primary-school students.
- Full paper was published in CHCI'19 as the first author.

WORK EXPERIENCE

- **Dianmao Technology CO.,Ltd** Beijing, China
Research and Development Intern, Teaching and Research Group Mar. 2018 - Mar. 2019
 - Participated in the development of knowledge graph in core project Pagoda, which serves as a programming capability level system for children.
 - Assisted to design the Wood (a python learning platform), which can convert Python code to graphical programming blocks.
 - Constructed K12 educational knowledge system of computer science and wrote the book *Training Manual for Computational Thinking* as third author.
- **Intelligent Science Laboratory of Beijing 35th Middle School** Beijing, China
Project-based Curriculum Development and Implementation Jun. 2016 - Mar. 2017
 - Led the core design of Smart Home prototype (in sand table), including sleep pattern detection module, automatic watering module, solar supply module and related mobile app.
 - Prepared the project-based curriculum about the Android, Aduino and Unity3D (AR design) development for middle school students.

SELECTED AWARDS AND HONORS

- Outstanding Student of University of Chinese Academy of Sciences 2017 - 2019
- National Scholarship (*Highest level of scholarship set by the government of China*) 2018
- Outstanding Graduates of Shandong Province (*Highest honor for graduate set by the government of Shandong*) 2016
- The Chinese Computer Federation (CCF) Outstanding Undergraduate Award (*Top 100 students in all junior and senior years of computer science undergraduate in China*) 2015
- Dean Scholarship (*Top 10 of all grades in computer science department*) 2015
- The First Class Scholarship of Shandong University 2014 - 2015
- Outstanding Student Leaders of Shandong University 2013 - 2015
- Shandong University's 10 Most Influential Student (*Top 10 of all students in Shandong University*) 2015
- The First Prize in Undergraduate Scientific and Technological Innovation Project 2015
- The First Prize in Mathematical Contest in Modeling of Shandong University 2015
- Honorable Mention in the Interdisciplinary Contest in Modeling (ICM) 2015
- The Second Prize in China Undergraduate Mathematical Contest in Modeling (CUMCM) (*Top 5.7% of more than 25,000 teams*) 2014
- The First Prize in Qilu Software Design Competition (*Top 10% of 469 teams*) 2014

SOCIAL ACTIVITIES

- **Academic Service:** Volunteer of UbiComp/ISWC in Singapore (with Student Travel Grant). Oct. 2018
- **Teaching Experience:** Taught computer science and Human Computer Interaction (HCI) technology to more than 170 middle school students in open scientist practice activities in Beijing Middle School. Mar. 2017
 Instructed 30 students in the scientific innovation practice class in Beijing 35th Middle School. 2017 - 2018

PROGRAMMING SKILLS

- **Languages:** C#, Python, Java, C/C++
- **Technologies:** AR/VR Game Development (Unity3D), Mobile Development (Android), Internet of Things (IoT), Computer Vision (OpenCV)