# Lei Zhang

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## EDUCATION

**Shanghai Jiao Tong University (SJTU)**, Shanghai, China                                Sept.2014 - present
**Bachelor of Software Engineering** (expected in Jul.2018)
GPA (overall): **3.4/4.0**; GPA (third-year): **3.8/4.0**
Core courses: Human Computer Interaction(A+), Game Design and Implementation(A), Computer Graphics, Computer Vision(A), Introduction to Computer Systems(A+), Curriculum Design of Programming(A+), Operating System, Computer System Engineering, Software Engineering, Algorithm, Principle and Technology of Database

## PUBLICATION

Ziang Xiao, Helen Wauck, **Lei Zhang**, Zeya Peng, Hanfei Ren, Shiliang Zuo, Wai-Tat Fu. *Cubicle: An Adaptive Educational Gaming Platform for Training Spatial Visualization Skills.* On Submission of the 23rd International Conference on Intelligent User Interfaces Companion (IUI2018, on submission)

## RESEARCH EXPERIENCES

**Assembly Assistance in Augmented Reality |** Research Assistant at Digital ART Lab                Sept.2017 - present
Supervisor: **Prof. Xubo Yang** (Professor in School of Software, SJTU)
- Implemented tracking and pose estimation of 3D models based on Kinect and Unity
- Designed and implemented the interaction between users and the system in gestures and vices based on HoloLens

**An Educational Gaming Platform |** Research Assistant internship at Cascade Lab of UIUC                Jul.2017 - Sept.2017
Supervisor: **Prof. Wai-Tat Fu** (Associate Professor in School of Computer Science, UIUC)
- Implemented a sketching application for the spatial skills training platform based on Unity webGL and Django
- Designed and implemented a game series for the training of students' spatial skills based on Unity

**Virtual Broadcast Studio |** Research Assistant at Digital ART Lab                Sept.2016 - Jun.2017
Cooperated with Star TV in Shanghai
Supervisor: **Prof. Shuangjiu Xiao** (Associate Professor in School of Software, SJTU)
- Implemented video capturing, camera calibration and 3D registration based on Unity
- Designed and implemented the interactions between the character and the virtual model based on Kinect

**Family Sharing APP |** Research group leader                Sept.2016 - Sept.2017
Supported by the National University Student Innovation Program
Supervisor: **Prof. Hongming Cai** (Professor in School of Software, SJTU)
- Designed and implemented an Android APP for sharing and interactions between family members
- Implemented the network programming and the database programming of client in java

## PROFESSIONAL EXPERIENCES

**VR Maze |** Develop group leader                Apr.2017 - Jun.2017
A VR game for training people's abilities of navigation
- Brought out the idea of training  people's navigation abilities in a VR game and co-designed the levels of the game
- Implemented the A-star Algorithm for path-searching in a randomized maze
- Designed and implemented the interactive operations based on HTC VIVE
- Ranked 1st out of 43 students in the Human Computer Interaction course

**Musical Shooting Game in VR |** Individual developer                Mar.2017 - May.2017
A VR game combining various gaming elements such as music, shooting, props and virtual-reality
- Brought out the gaming mechanism of shooting objects based on the rhythm of music in VR
- Implemented music processing and the animation of character based on finite-state machine
- Implemented the Non-photorealistic Rendering of the character using Unity Shader
- Included particle systems, collision and different scenes in the game
- Implemented the whole gaming logic

**Automatic Water-level Detection System |** Develop group leader                Sept.2016 - Dec.2016
Supervisor: **Dr. Kai Xiao**

- Implemented the pre-processes of images and retrieved the characteristics of the water gauge
- Trained the prediction model using methods of machine learning

**ATT Attendance Checking** | Software Engineering Intern                                  Aug.2016 - Sept.2016
Company: BOTOP Intelligence Technology Company, Zhongshan, Guangdong Province, China
- Designed and implemented the database of the APP based on mysql
- Implemented the wrapping of Baidu Map API for checking attendance based on location

## AWARDS

**The National Endeavor Scholarship**, Ministry of Education of People's Republic of China                 2016

## EXTRACURRICULAR ACTIVITIES

- The 5$^{th}$ place in "Top-ten singers of campus" Musical Contest of Shanghai Jiao Tong University        2015
- Host of the Master Distinguished Lecture in Shanghai Jiao Tong University              Oct.2014 - Sept.2015

## SKILLS AND OTHERS

**Programming:** C/C++, C#, Java, Python, PHP, HTML, Javascript, SQL;
**Languages:** Mandarin: Native; English: Fluent, Toefl (104, Speaking(26)); Cantonese: Native;
**Interests:** Singing, Producing music, Guitar, Basketball, Swimming, Photography