

# TIANLONG ZHANG

<https://tianlongz.github.io>  
(385)2028279 ♦ [tianlong.zhang@utah.edu](mailto:tianlong.zhang@utah.edu)  
Salt Lake City, Utah

## EDUCATION

---

<b>University of Utah, Salt Lake City, Utah</b> Master of Science in Electrical and Computer Engineering	<i>2018/08 - Present</i> <i>GPA:3.85/4.0</i>
<b>Beihang University, Beijing, China</b> Master of Science in Control Theory & Engineering	<i>2015/09 - 2018/03</i> <i>GPA:85.49/100</i>
<b>Northwestern Polytechnical University, Xi'an, China</b> Bachelor of Science in Automation	<i>2011/09 - 2015/06</i> <i>GPA:85.67/100</i>
<b>Feng Chia University, Taichung, Taiwan</b> Course-work Exchange student in Automatic Control Engineering	<i>2013/02 - 2013/06</i> <i>GPA:4.0/4.0</i>

## WORK EXPERIENCE

---

<b>Graduate Assistant</b> <i>Supervised by Dr.Tolga Tasdizen</i>	<i>2018/10 - 2019/05</i> <i>University of Utah</i>
---	---

- Developed a data processor to convert OData from VikingXML with mosaic space from University's hospital database to the local computer.
- Developed a refined U-net with Tensorflow that only focus on the labels that annotated.
- Achieved more than 70% accuracy on 2000 pictures while the annotation of the correct membrane is very limited to learn.

<b>Product Manager</b> <i>Cheetah Mobile</i>	<i>2018/04 - 2018/07</i> <i>Beijing, China</i>
---	---

- Wrote SQL script to retrieve marketing data and analyze the data of the Cheetah Keyboard theme.
- Performed AB test on the upcoming keyboard theme and following the data with the programs developed by Cheetah Mobile after the theme is launched.
- Worked with a team of 7 and came up with solutions to optimize the low-performance themes with better user responses.

## PROJECTS

---

<b>Visualization for Data Science Website Development</b> <i>University of Utah</i>	<i>2019/09 - current</i> <i>Salt Lake City, UT</i>
--	---

- Developed a webpage for data visualization using HTML, CSS, JavaScript and D3 as front-end tools to render data with multiple perspectives of the data, like map, scatterplot, etc.
- Used MongoDB, Express as backend tools to access the database and also update the data with common routes.

<b>Vehicle Tracking</b> <i>University of Utah</i>	<i>2018/09 - 2018/12</i> <i>Salt Lake City, UT</i>
--	---

- Developed a vehicle tracking software with Matlab to track moving vehicles with a surveillance camera.
- Developed a straightforward object detection, object tracking algorithm within the algorithm that achieved 90% accuracy on the dataset with a fast processing time.

## ATM/POS machine PIN breaking Project

Remotely worked with Dr. Shujun Li

2015/10 - 2016/03

University of Surrey, UK

- Implemented the TLD tracking algorithm to track the path of people's hands while pressing the PIN button.
- Implemented the K-means algorithm to cluster the data that we collected through TLD, and then analyzed the PIN with trace and frequency of the frame.
- Method got 14 correct predictions among 18 random people with 6-digit PIN.

## Kinect 2.0 Application Project

Worked with Dr. Zhong Zhou

2015/10 - 2015/12

State Key Laboratory of Virtual Reality Technology, Beijing

- Developed Kinect 2.0 SDK in C++ to make extension applications.
- Developed a slide presentation application, keyboard typing application and a video game application based on body movement using Kinect 2.0.
- Our applications got the highest score of the class.

## AWARDS

---

- Graduate Assistant Scholarship from Department of Electrical and Computer Engineering of the University of Utah.
- First-Class Scholarship of Northwestern Polytechnical University(top10%)
- Graduate Student Scholarship of Beihang University

## SKILLS

---

- Web Development: JavaScript, HTML, CSS, D3, Bootstrap4, MongoDB, SQL, Express, React.
- Data Science: Python, MATLAB, Julia, Tensorflow, Keras, Pytorch.

## PUBLICATIONS

---

- **T.-L. Zhang**, X.R. Shen, Q.F. Xiu, L.D. Zhao, "Person Re-identification based on Minimum Feature using Calibrated Camera", *Chinese Intelligent System Conference*, Mudanjiang, China, 533-540, October 2017
- Q.-F. Xiu, X.R. Shen, **T.L. Zhang**, L.D. Zhao, "An Immersive Roaming Method based on Panoramic Video", *Chinese Intelligent System Conference*, Mudanjiang, China, 431-441, October 2017
- X.-R. Shen, P. Hong, Q.F. Xiu, **T.L. Zhang**, "An Interactive Registration Method for Images to the 3D Urban Scene Model", *International Symposium on Computational Intelligence and Design(ISCID)*, vol.2, 176-179, Hangzhou, China, December 2016