TIANLONG ZHANG

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Salt Lake City, Utah

EDUCATION

University of Utah, Salt Lake City, Utah *2018/08 - 2020/05*
Master of Science in Electrical and Computer Engineering *GPA:3.90/4.0*
Courses: Advanced Algorithm, Visualization for Data Science, Machine Learning, Deep Learning, Image Processing, Optimization

Beihang University, Beijing, China *2015/09 - 2018/04*
Master of Science in Control Theory & Engineering *GPA:3.549/100*

Northwestern Polytechnical University, Xi'an, China *2011/09 - 2015/06*
Bachelor of Science in Automation *GPA:3.567/100*

Feng Chia University, Taichung, Taiwan *2013/02 - 2013/06*
Course-work Exchange student in Automatic Control Engineering *GPA:4.0/4.0*

WORK EXPERIENCE

Research Assistant *2019/05 - Current*
Supervised by Dr.Mostafa Sahraei-Ardakani *University of Utah*

- Implemented a reinforcement learning algorithm with **Python** to predict the unit commitment results for the power outage by hurricanes.
- Participated in the power flow optimization competition with **Julia**.
- Developed a linear programming algorithm and our Method got 13th place across the US.

Graduate Assistant *2018/10 - 2019/05*
Supervised by Dr.Tolga Tasdizen *University of Utah*

- Developed a data processor with **Python3** 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.

Product Manager *2018/04 - 2018/07*
Cheetah Mobile *Beijing, China*

- 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.
- Found dynamic solutions to optimize the low-performance keyboard themes with better customer feedback.

PROJECTS

Webpage Development: Visualization for Data Science *2019/09 - 2019/11*
University of Utah *Salt Lake City, UT*

- Developed 2 webpages for data visualization using **HTML, CSS, JavaScript** as front-end tools.

- Used **Bootstrap4** to set up the layout (Jumbotron, Navbar, Dropdown etc.) of webpage.
- Used **D3** to visualize and render data with multiple perspectives, like heat map, scatterplot, beeswarm etc.
- Received **full** score for both webpages.

Vehicle Tracking: Image Processing *2018/09 - 2018/11*
University of Utah *Salt Lake City, UT*

- 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 *2015/10 - 2016/03*
Supervised by Dr. Shujun Li *University of Surrey, UK*

- Implemented the TLD tracking algorithm with **MATLAB** 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.
- Achieved 14 correct predictions among 18 random people with 6-digit PIN.

AWARDS

- Graduate Scholarship from Department of Electrical and Computer Engineering of the University of Utah.
- First-Class Scholarship of Northwestern Polytechnical University (top 5%)
- Graduate Student Scholarship of Beihang University (top 10%)

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