ZHICHENG DING

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EDUCATION

Columbia University	New York, NY
M.S in Computer Science, GPA: 3.79/4.00. Track: Machine Learning	Expected May 2019

South China Normal University	Guangzhou, CN
B.S. in Electronic Information Engineering, GPA: 3.47/5.00 (Top 3%), Dean's List	2016

RESEARCH EXPERIENCE

New York University, Multimedia and Visual Computing Lab	New York, NY
Research Assistant - Advisor: Edward Wong	May 2018 - Present

- Designed a tracking-by-detection framework that easily integrates different detector and tracker.
- Published: *Confidence Trigger Detection: An Approach to Build Real-time Tracking-by-detection System*. (Reviewed by CVPR 2019)

Columbia University, DitecT (Data & innovative technology-driven Transportation) Lab	New York, NY
Research Assistant - Advisor: Sharon Di	May 2018 - Aug 2018

- Designed a taxi game with reinforcement learning and deep reinforcement Learning to suggest better pickup spots.
- Agent performs 58.3% more reward and 20% more occupancy rate than real drivers.
- Proposed a new approach that aggregates dynamic traffic setting to infer real information.

Columbia University, Center for Computational Learning System	New York, NY
Research Assistant - Supervisor: Albert Boulanger	Jan 2018 - May 2018

- Predicted 96-step ahead indoor temperature using LSTM, DNN, and BNN which outperforms popular RNN models.
- Published: *Using an Ancillary Neural Network to Capture Weekends and Holidays in an Adjoint Neural Network Architecture for Intelligent Building Management.* (Reviewed by AAAI 2019)

South China Normal University, South China Academy of Advanced Optoelectronics	Guangzhou, CN
Research Assistant - Advisor: Bin Zhou	Aug 2014 - Jan 2016

- Published a utility patent: Patent Number: ZL. 2015 2 0015530.3. Issued date: 2015.05.20.
- Designed an efficient way to build an automated Internet of Things (IoT) system for lab management.
- Designed anti-theft, toxic detection, temp control system; the system has alerted and mitigated 138 accidents.

PROFESSIONAL EXPERIENCE

WellAV	Huizhou, CN
Software Development Engineer	Mar 2016 - Jul 2017

- Optimized compiling system in build server: on average, shorten build time from 27hrs to 5hrs.
- Maintained backend of HD product and developed backend (controlling board) for new UHD product.

Ericsson	Guangzhou, CN
Software Development Engineer (Intern)	Jul 2015 - Dec 2015

- Assisted in the development of test automation system using deep learning.
- Conducted test report analysis and generation; this system has saved 10,000 man hours by 2017.

SELECTED PROJECT EXPERIENCE

Sponge: A Platform for Buying and Selling Secondhand Items	Jan 2018 - May 2018

- Developed the backend using flask framework in Python, MySQL and Redis as database to support 5 million items.
- Developed the functions including instant message, following sellers, database retrieves and updates API.

Moving Object Tracking and Detecting	Mar 2015 - May 2016

- Developed a system for multiple moving objects detecting and tracking using optical flow.
- Implemented optical flow with corner detection which shortens time complexity by 9.6% with acceptable accuracy.

SKILLS

Passion for Python, C/C++, Java, Matlab, Computer Vision, Reinforcement Learning.
Adept at teamwork, creative thinking, self-motivated, Agile / Scrum, Git / SVN, Test Automation, data structures, Algorithm.