

Zhi Ji

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SUMMARY

Master student at Columbia University with extensive experiences in machine learning, deep learning and computer vision, Software Engineering and Internet of Things. I also have two deep learning related publications.

EDUCATION BACKGROUND

Columbia University *New York, NY* (Expected) 09/2018 - 12/2019

MS in Electrical Engineering & Computer Science

Relevant coursework: Internet of Things; Reinforcement Learning; Deep Learning for Computer Vision, Natural Language Processing and Speech Recognition; Introduction to Database;

University of California Berkeley *Berkeley, CA* 01/2017 - 12/2017

Exchange Student in Electrical Engineering & Computer Science

Relevant coursework: Machine Learning and Data Analytics; Data Structure; Digital Signal Processing; Communication Network;

University of Electronic Science & Technology of China *Chengdu, CN* 09/2014 - 07/2018

BS in Electronic Information Engineering Cumulative GPA: 3.8/4.0

Relevant coursework: Pattern Recognition; Visual Digital Video Technology & Application; C language; Fundamentals of Software;

PROFESSIONAL EXPERIENCE

Chinese Academy of Sciences | Research Assistant *Beijing* 04/2018 - 08/2018

- Developed several machine learning and deep learning models for share price and future price prediction.
- Researched on the algorithm for detecting black product attack with imbalanced sample distribution and missing features.
- Developed several stock trading strategies with the help of the prediction of machine learning models.
- Published a paper at CSAE 2018: <https://dl.acm.org/citation.cfm?id=3277966>.

RESEARCH EXPERIENCE

Berkeley Video and Image Processing lab | Research Assistant *University of California Berkeley* 05/2017 - 12/2017

- Developed a sensor-based sorghum height estimation algorithm by image processing techniques with Open CV.
- Participated in the training of a Fast RCNN model to crop the bounding boxes of stems of sorghum from images.
- Developed a width estimation algorithm by image processing techniques with MATLAB and Open CV.
- Published at Electronic Imaging 2018: <http://www-video.eecs.berkeley.edu/papers/jihui-jin/jihui-height-ei-2018.pdf>.

PROJECT EXPERIENCE

Internet of Things *Columbia University* 09/2018 - 12/2018

- Built a functional smart watch controlled by voice messages sent from Android Application and involving gesture recognition.
- Programmed embedded system through SPI and I2C protocols as well as socket programming and RESTful API.
- Built an activity monitoring device that recognizes carrier's activities through accelerometer data and emotion and gender by deep neural networks and created an animation character to mimic the activity on front end by TensorFlow and JavaScript.
- Developed android application and deployed cloud infrastructure with non-relational database and microservices on AWS.

Full-Stack Web Development *Columbia University* 09/2018 - 11/2018

- Designed and created database schemas for an online shopping website using PostgreSQL.
- Built the webpages using HTML, CSS and JavaScript on front-end and flask on back-end.

Computer Vision *Columbia University* 10/2018 - 12/2018

- Designed and trained a cDCGAN with classifier for face image completion and classification.
- Refined a deep Q-learning algorithm for image restoration by Double Q-learning, Prioritized Replay and Dueling Q-learning.

PROFESSIONAL SKILLS

- Technical Skills: Python/ Java/ JavaScript/ C++/ R/ SQL/ MATLAB/ HTML/ CSS/ TensorFlow/ Keras/ Gym.
- Machine Learning: Deep Reinforcement Learning, Deep Learning, Computer Vision, Quantitative Analysis, GANs.
- System: Internet of Things, Web and Mobile Application Development, Software Engineering, Cloud Computing.

ACTIVITIES

- NBA hackathon: Developed a machine learning algorithm for predicting total viewers of NBA games.