Lanxin Lei

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Embedded specialty. Graduation time: 30/06/2019 GPA: 3.49/4

## PROFILE SUMMARY

• Research: A published paper in ICLR 2019. Four research experiences.

• Engineering: Two engineering practices. Three competitions.

• Expertise: Reinforcement Learning. Recommendation System

• Programming Skills: Python, Bash, Java, C

#### RESEARCH EXPERIENCES

• Mmlab

Research Assistant

Hong kong, CN

Sep. 2018 - Present

• Exploration more for potentially good actions

- \* Implemented the method that made use of shorter estimations to encourage actions with potential of being good.
- \* Verified the effectiveness in 8 Mujoco environments, 3 Atari environments and 3 sparse environments.
- \* Preparing for submitting the project to NeurIPS 2019.
- o Exploit in exploration
  - \* Implemented the method that used the signs of advantage value to train a discriminator for improving sampling efficiency of policy, trained in the Mujoco environments.
  - \* Analyzed reasons for little effect of the method.
- Sub-Environments
  - \* Created two sub-environments for Arm3D environment to make reward designing easier.
  - \* Implemented the method that parallelly trained both the sub-environments and the initial environment.
  - \* Validated the effectiveness of the method in a toy simulator, a grid world with one single line.

• Sensetime Shenzhen, CN

 $Research\ Intern$ 

Jan. 2018 - Sep. 2018

- Self-driving Car
  - \* Implemented Reinforcement Learning algorithms such as DDPG, A2C and ACER for Multi-Cars control.
  - \* Successfully trained the algorithms in Multi-Cars simulator.
- Lecture for AI education
  - \* Made three lectures in Artificial Intelligence to middle school teachers.

• SAP

Research Intern

Chengdu, CN

Jul. 2017 - Jan. 2018

o Calculated the similarity of commodities by Word2Vec and the Word Movers Distance

- Accomplished Recommendation System by using Matrix Decomposition.
- Replaced A/B Test with Bandit Algorithm to improve the adjustment of recommendation strategy.

### • Institute of Information Engineering, Chinese Academy of Sciences

Beijing, CN

Research Assistant

Jan. 2017 - Feb. 2017

- Implemented the Siamese-FC model to track of the target car in the video.
- Implemented Bayesian Face Algorithm to judge whether two faces belong to the same person.

## PUBLICATION

- An on-policy temporally consistent exploration method for deep reinforcement learning ICLR 2019
  - Introduced the dropout of hidden neuron unit to reinforcement learning policies.
  - Trained experiments, visualized performance comparison for paper writing.

#### ENGINEERING EXPERIENCES

## • Joint laboratory of schools and enterprises

Chengdu, CN

Oct. 2015 - Jun. 2017

Research Assistant

- ERP: Implemented query function for record management system by Microservices Architecture in Java.
- Commercial projects: Analyzed the existing fresh market and designed product based on the achievable technology.

## COMPETITION

### • Based on pavement security camera to predict abnormal human flow

27/03/2017

- Project awards 2017 SAP Innovation Competition champion
  - \* Designed a Computer Vision system to monitor the crowd flow based on the existing security monitoring.

## • Future kitchen-personal assistant

22/04/2016

- o Project awards BOE Cup Honor Award
  - \* Designed a Wisdom Kitchen Product for smart city.
  - \* Achieved wisdom functions, such as automated cooking, recommended recipes, kitchen safety supervision, and analysis of dietary balance.

# • Ping-Let you no longer worry about college dormitory

8/19/2015

- o Project awards Changhong Cup third prize
  - \* Designed a sociology-based assessment algorithm to reduce the occurrence of dormitory conflicts by optimizing the dormitory allocation mechanism.
  - \* Invited a psychology teacher to assist the project.

# VOLUNTEER ACTIVITY

• UESTC 60th anniversary volunteer

27/09/2016 - 29/09/2017

• China College Student' Entrepreneurship Competition volunteer

15/11/2016 - 20/11/2016

• Maker Faire Chengdu volunteer

13/12/2016 - 14/12/2016