

# Anson Wong

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Programming language: Python, Java, C#, C++.  
Framework: Tensorflow, Keras.

## Education

### The University Of Southern California

CA, U.S.A

M.S. IN COMPUTER SCIENCE

Sep. 2018 - Present

Related Courses: Foundation of artificial intelligence | Analysis of Algorithms | Deep Learning and its Applications

### The University Of Hong Kong

Hong Kong

B.S. IN COMPUTER SCIENCE

Sep. 2013 - Jun. 2018

Related Courses: Functional Programming | Computer Vision | Computer and communication networks | Modern Technologies on World Wide Web | Artificial Intelligence | Design and analysis of algorithms | Principles of programming languages

### The University of North Carolina at Chapel Hill

NC, U.S.A

ONE-YEAR EXCHANGE STUDENT, IN COMPUTER SCIENCE

Aug. 2016 - May. 2017

Related Courses: Introduction to machine learning | Advanced machine learning | Algorithms of motion

## Experience

### Robotic Embedded Systems Laboratory - USC Robotics Research Lab

CA, U.S.A

RESEARCH ASSISTANT

Oct. 2018 - Present

- Implements reinforcement learning algorithms in TensorFlow.
- Actively working on an open source reinforcement learning framework called Garage.  
(URL: <https://github.com/rlworkgroup/garage>)

### Undergraduate Research at The University Of North Carolina at Chapel Hill (Prof. Dinesh Manocha)

NC, U.S.A

UNDERGRADUATE RESEARCH ASSISTANT, WORKING ON CROWD SIMULATION AND ROBOT NAVIGATION

Sep. 2016 - May. 2017

- Automated unannotated crowd videos generation. Built with synthetic agents and real-world background using simulation tool and unreal engine 4.
- Experiment obstacle avoidance policies on a turtlebot.  
(Report: <https://ahtsan.github.io/CAalgo.pdf>)

### Undergraduate Research at The University Of Hong Kong (Dr. Kenneth Wong)

Hong Kong

STUDENT IN HKU COMPUTER VISION GROUP

Mar. 2016 - May. 2016

- Visualizing learning performance of deep learning models.
- Dynamic generation of deep learning models with high-level parameters.

### Undergraduate Research at The University Of North Carolina at Chapel Hill (Prof. Dinesh Manocha)

NC, U.S.A

VISITING STUDENT

June. 2015 - Sep. 2015

- Synthetic crowd dataset generation using multi-agent simulation tool and unreal engine 4.  
(URL: <http://gamma.cs.unc.edu/LCrowdV/>)

### HKU Advanced Robotic Laboratory

Hong Kong

STUDENT MEMBER

Jan. 2015 - Jun. 2015

- Worked on robot arm manipulation. Created a demo in which a humanoid robot (atlas) drawing on a board.

### Fundroots Creative Software Ltd.

Hong Kong

SOFTWARE ENGINEER

Aug. 2016 - Aug. 2018

- Worked on a trading system backend.
- Developed an Android mobile application.

## Projects

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### Training Collision Avoidance Policy in Simulation through Deep Reinforcement Learning

Hong Kong

HKU CS FINAL YEAR PROJECT

2018

- Using Unreal Engine 4 to train a collision avoidance policy using state-of-the-art Deep Reinforcement Learning algorithm and machine learning frameworks.
- URL: <https://ahtsan.github.io/rlbot/>

## Honors & Awards

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2016 **Rosita King Ho Scholarship**, (Support oversea exchange)

Hong Kong

2015 **The Arthur and Louise May Memorial Fund Scholarship**, (Support oversea research)

Hong Kong

2013 **Sir Edward Youde Memorial Prizes**, (Support academic outstanding students)

Hong Kong

2012 **Silver Award**, Asia International Mathematical Olympiad

Hong Kong

### 11th Annual Undergraduate Research Symposium at UNC-CH

NC, U.S.A

PRESENTING "SYNTHETIC DATA FOR CROWD AND HUMAN UNDERSTANDING"

Apr. 2017

- Introduced the use of synthetic data in crowd understanding. Talked about the advantages over conventional human labelling and how it improved pedestrian detection accuracy.

## Publications

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### MixedPeds: Pedestrian Detection in Unannotated Videos using Synthetically Generated Human-agents for Training

Paper

COAUTHOR

2017

- Accepted in AAAI 2018
- URL: <https://arxiv.org/abs/1707.09100>

### LCrowdV: Generating Labeled Videos for Simulation-based Crowd Behavior

Paper

COAUTHOR

2016

- Accepted in ECCVW 2016
- URL: <http://gamma.cs.unc.edu/LCrowdV/>

## Extracurricular Activity

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### DARPA Robotic Challenge

CA, U.S.A

STUDENT MEMBER FOR HKU TEAM

Jun. 2015

- Involved in robot operation.