

Anson Wong

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Education

The University Of Southern California

CA, U.S.A

M.S. IN COMPUTER SCIENCE, GPA: 3.5

Aug. 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, GPA: 3.6

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, GPA: 3.87

Aug. 2016 - May. 2017

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

Skills

Programming language

ADVANCED: PYTHON, JAVA, C#, C++ | INTERMEDIATE: HASKELL, PHP, SQL, JAVASCRIPT, HTML, CSS

- Python, C++: Primary language, working in open source project.
- Java, C#: Familiar with OOP design, Used on several projects/coursework.

Tools

ROS, ROS2, TENSORFLOW, KERAS, GIT, DOCKER, PROTOCOL BUFFERS, GRPC

Experience

Amazon - AWS Robotics

CA, U.S.A

SDE INTERN

Jun. 2019 - Aug. 2019

- Designed and implemented features for AWS RoboMaker.

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

Training Collision Avoidance Policy in Simulation through Deep Reinforcement Learning

HKU CS FINAL YEAR PROJECT

- 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/>

3D Face Recognition

PERSONAL PROJECT

- Perform 3D Face Recognition on face meshes based on Hausdorff distance.

Honors & Awards

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|------|---|-----------|
| 2016 | Rosita King Ho Scholarship , (Support academic outstanding student in oversea exchange) | Hong Kong |
| 2015 | The Arthur and Louise May Memorial Fund Scholarship , (Support academic outstanding student in 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.

Publication

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

Paper

COAUTHOR

2017

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

LCrowdV: Generating Labeled Videos for Simulation-based Crowd Behavior

Paper

COAUTHOR

2016

- Published in ECCVW 2016
- URL: <http://gamma.cs.unc.edu/LCrowdV/>
- Published in Neurocomputing Journal
- URL: <https://doi.org/10.1016/j.neucom.2018.08.085>

Extracurricular Activity

DARPA Robotic Challenge

STUDENT MEMBER FOR HKU TEAM

- Involved in robot operation.

CA, U.S.A

Jun. 2015