Anson **Wong**

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Education

The University Of Southern California *CA, U.S.A*

M.S. in Computer Science *08/2018 - 05/2020*

Related Courses: Machine Learning | Foundation of artificial intelligence | Analysis of Algorithms | Deep Learning and its Applications | Web Technologies | Robotics

The University Of Hong Kong *Hong Kong*

B.S. in Computer Science *09/2013 - 05/2018*

Related Courses: Machine Learning | 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 visiting student, Computer Science *08/2016 - 05/2017*

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

Skills

Programming language

Advanced: Python, C++ | Intermediate: Java, C, Haskell, SQL, JavaScript, HTML, CSS

Tools

ROS, ROS2, Unreal Engine 4, TensorFlow, Git, Docker, Protocol Buffers, gRPC, AWS services

Experience

Amazon Web Services *CA, U.S.A*

SDE | SDE II *06/2020 - 12/2021 | 12/2021 - Present*

- Develop robot simulation applications for AWS RoboMaker demos and contribute to the open source community.
- Design and implement interfaces for easy-to-run robotic simulation with physics simulator as a service.
- Work on the core technology behind generating synthetic data in a service using Unreal Engine 4.
- Work on the infrastructure and CI/CD for AWS SimSpace Weaver, a service that allows easy-to-run large-scale spatial simulation in the Cloud.

Amazon Web Services *CA, U.S.A*

SDE intern *06/2019 - 09/2019*

- Design and implement a feature in ROS2 for AWS RoboMaker.

Robotic Embedded Systems Laboratory - USC Robotics Research Lab *CA, U.S.A*

Research Assistant *10/2018 - 05/2020*

- Implement reinforcement learning algorithms in TensorFlow.
- Actively working on an open source reinforcement learning framework – 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 *09/2016 - 05/2017*

- Automated unannotated crowd videos generation. Built with synthetic agents and real-world background using simulation tool and unreal engine 4.

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

NC, U.S.A

VISITING STUDENT

06/2015 - 09/2015

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

Projects

Training Collision Avoidance Policy in Simulation through Deep Reinforcement Learning

HKU CS FINAL YEAR PROJECT

- Used 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/`

Generating Images with Few Shot Meta-Learning

USC COURSE PROJECT

- Blog: `https://medium.com/@utkarshjp7/generating-images-with-few-shot-meta-learning-25bf1d301ab0#0ff9`

Honors & Awards

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"

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 and Neurocomputing Journal
- URL: `http://gamma.cs.unc.edu/LCrowdV/`, `https://doi.org/10.1016/j.neucom.2018.08.085`

Extracurricular Activity

DARPA Robotic Challenge

CA, U.S.A

STUDENT MEMBER FOR HKU TEAM

2015