Anson **Wong**

+1(747)218-9531 | ahtsans@gmail.com | https://ahtsan.github.io/ | ahtsan | ahtsan

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

Education

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

M.S. in Computer Science — *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 — *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

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

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

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

DARPA Robotic Challenge — *CA, U S.A*

Student member for HKU Team — *Jun. 2015*

- Involved in robot operation.