

# HAO WANG

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## EDUCATION

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**Georgia Institute of Technology, Atlanta**

*August 2019 - Present*

Master in Electrical and Computer Engineering

**Tianjin University, Tianjin China**

*September 2015 - June 2019*

Bachelor of Engineering, Automation.

Overall GPA: 3.58(on a 4.0 scale)

## PERSONAL PAGE

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<https://seraveea.github.io>

## PROJECTS

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**Intelligent Garbage Identification and Sorting — Tianjin University** **2018**

The project aims at designing a system to sort garbage by computer vision. As a classification problem, a unique garbage image data which contain thousands of labeled image set was built and a CNN is implemented.

**Complex Text Detection on Garbage Image Data Set — Tianjin University** **2019**

Implement and improve Pixel-Link CNN which combines semantic segmentation and object detection on garbage image text data set. Prepare the data, improved Pixel-Link, test network and hyper-parameter tuning.

**Combination of Image Compression and Contrast Enhancement in Aerospace Application — Georgia Institute of Technology** **2019**

Put forward a hybrid approach to improve the visual quality of images from satellites. Three methods in image processing are implemented, improved and combined in this approach. DWT-SVD, combined Huffman coding and blocking effect reduction were implemented to improve traditional methods.

**Estimation, Comparison and Analysis of Yellow Taxi in NYC — Georgia Institute of Technology** **2019**

Around 8 gigabyte data was used to train a LightGBM model to generate the taxi fare in NYC by pick up location and destination. An interactive user web page was built which can show the map of NYC by Google map and the price could be compute back-end. Several experiments were made to analysis and compare the price of Lyft and yellow taxi.

**Shadow of Star Raider — Georgia Institue of Technology** **2020**

A 3d third-person adventure game developed by Unity3D. The player's goal is to cross the alien ruins, successfully defeat different enemies and return to the dock. The player can collect helpful elements while also feel the thrill of a fierce battle with cold-blooded enemies.

## RESEARCH EXPERIENCE

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**Institute of Robotics and Autonomous Systems of Tianjin University** **2018**

Work as an undergraduate research assistant supervised by Prof. Ming Zeng(vice director of the institute).

Build polymorphic robot system and implement obstacle avoidance algorithm on it using Arduino.

Collect and annotate image data sets.

## TECHNICAL STRENGTHS

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<b>Programming</b>	Python, JavaScript, HTML, CSS, Java, C++, C#
<b>Software&amp;API</b>	Matlab, Pytorch, Unity, Tableau, Gephi, OpenGL, Bootstrap, Hadoop

## HONORS&AWARDS

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Merit student scholarships(top 15% in department)	2016
Merit student scholarships(top 15% in department)	2017
Merit student scholarships(top 15% in department)	2018

## SELECTED COMPETITION

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Kaggle Competition:

House Prices: Top 8% (ongoing, rank may change in the future)

ALASKA2 Image Steganalysis: Silver Medal (2 month to go, rank may change in the future)