

# Chaoyue Wang

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## EDUCATION

**New York University**, New York, NY  
*Master of Science in Computer Engineering* GPA: 3.95/4.0

Expected May, 2018

**Tianjin University**, Tianjin, China  
*Bachelor of Engineering in Measuring and Controlling Technologies and Instruments*

July, 2016

## SKILLS

- Experienced in several tools, software and systems: Sublime, XCode, CMake, Visual Studio, Anaconda, OpenCV, PCL, Spark, MySQL, GitHub, Windows, macOS, Linux Debian series
- Experienced in several programming languages: C/C++, Python, and familiar with: Java, HTML, JS, CSS, Assembly
- Familiar with deep learning model and tools: CNN, RNN, TensorFlow, Caffe

## RELEVANT EXPERIENCE

**MMVC Lab, New York University**, Brooklyn, NY  
*Research Assistant*

May, 2017 – September, 2017

- Conducted research on neural network based image semantic segmentation
- Enhanced Fast-RCNN based text detection and bi-directional LSTM based recognition algorithm for automatic drive system

**WiNS Lab, Lehigh University**, Bethlehem, PA  
*Research Assistant (Internship)*

February, 2016 – June, 2016

- Conducted research to improve the indoor localization and navigation features of low-cost LILI robot with iCreate
- Designed and applied the SLAM and navigation algorithm with RBPF, augmented Monte Carlo localization (AMCL), Kullback-Leibler divergence sampling (KLD), Dijkstra, ROS, C++ and Python to allow the robot run in building automatically

## PROJECTS

**Python Web Service Development – Personal Blog**

August, 2017 – present

GitHub: <https://github.com/wcy940418/flask-bootstrap-vue-blog>

- Developed a personal blog based on Flask from scratch and RESTful APIs for blog services
- Created responsive web pages utilizing AJAX technology and MVVM architecture with Bootstrap, Javascript and Vue.js
- Built relational database (MySQL) with SQLAlchemy to store both the author's and authorized API users' profiles
- Utilized OpenWeatherMap API and HTML5 geolocation to provide users with local weather information

**Computer Vision – Patch based construction matching algorithm**

July, 2017 – present

- Conducted research to match constructions and find out changes between images from different viewpoints
- Leveraged HOG descriptor, L2-norm criterion and shift searching approach to match similar parts in images
- Implemented the algorithm with OpenCV library and C++

**Deep Learning – Point To Tell (Blind Assistant)**

June, 2017 – September, 2017

- Researched on scene parsing network to segment image into semantic regions by CNN and Pyramid Pooling approach
- Developed a computer vision based hand extraction algorithm and a 3D KNN searching approach to analyze finger point position
- Used TensorFlow to create, train, tune and evaluate neural network, and Point Cloud Library to filter and rebuild 3D scene
- Utilized stereo camera (Zed camera) to extract depth information

## VOLUNTEER&LEADERSHIP

**Autonomy Lead of NYU Robotic Design Team**, New York University

May, 2017 – present

**Network Lead of NYU Robotic Design Team**, New York University

September, 2016 – May, 2017

**Organizer of National Youth College Science Camp**, Tianjin, China

August, 2014

**Chairman of TIM Student Lab**, Tianjin University

June, 2013 – January, 2015