

# ZIYU LIU

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Github: <https://github.com/dlydb>

## EDUCATION

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### Cornell Tech at Cornell University

Aug. 2019 - May. 2020

Master of Engineering in Computer Science

**Related Courses:** Algorithms and Data Structure for Applications, Applied Machine Learning, Interactive Device Design, Virtual and Augmented Reality

### Rensselaer Polytechnic Institute

Sep. 2015 - May. 2019

Bachelor of Science in Electrical Engineering and Computer Engineering

GPA: 3.75 / 4.00

Dean Honor List, Captain of Chinese Basketball Team

Undergraduate Teaching Assistant in Embedded Control

Performance Excellence Award for Best Consumer Product Design

**Related Courses:** Computer Vision, Introduction to Artificial Intelligence, Database System

## EXPERIENCE

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### Undergraduate Researcher, LESA, Troy, NY

Jan. 2018 - May. 2019

- Built different simulated rooms with **Unity** and tested simulated sensors under **VR** environment
- Developed a maximum likelihood estimation-based algorithm for the **privacy-preserving tracking** and **pose estimation** with **89%** accuracy and reduced **24%** energy usage
- Analyzed data to reconstruct the room and people movement with **Python** and **OpenCV**
- Worked with team on sensors installation and network between sensors on real room

### Undergraduate Research Assistant, CISL, IBM, Troy, NY

Mar. 2017 - Aug. 2017

- Extracted data from DBpedia using **JavaScript** from dozens of domains
- Improved the algorithm of analogy system with new model
- Integrated the analogy server into the mandarin project to generate analogy between American and Chinese cuisine

## PROJECTS

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### Medicine Management

Sep. 2018 - Dec. 2018

- Developed **Django** application on **Raspberry Pi** with local server
- Created a user-friendly interface especially for seniors with bold text and easy boot-up system
- Created customized calendar **UI** for different groups of costumers
- Developed **database** to save user login credential and medication information for care provider

### 3D-STITCHING

May. 2018 - Aug. 2018

- Developed a novel algorithm to reconstruct large-scale 3D scene datasets from smaller subsets of data based on the hypothesis of knowing 3D model direction, which can save running time of merging two 3D models

### Pac-Man Project

Jan. 2018 - May. 2018

- Used different search algorithms, such as **uniform cost** and **A\* search** to navigate Pac-man in the problems in the project
- Implemented **model-free** and **model-based reinforcement learning** algorithm to Pac-man

## SKILLS

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Python, C/C++, C, MATLAB, SQL, Unity, OpenCV, Django, Arduino, Raspberry Pi