

My Experience in City College of New York with Habatake Program

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B3
Mechanical Eng.

Hibari Lounge
 November 19th 2019



City College of New York

CUNY City College, located in Hamilton Heights, Upper Manhattan

The CCNY is organized into five schools plus The Macaulay Honors College:

- The College of Liberal Arts and Sciences
- The Bernard and Anne Spitzer School of Architecture
- The School of Education
- The Grove School of Engineering
- The Sophie B. Davis School of Biomedical Education



Accomodation



We stayed on AirBnb in Richmond Hills, Queens



10 mins from major airports , 2 mins to sub way, across the street from 24 hour supermarket, laundry, and pharmacy

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Shopping and laundry

5 minutes walk to 24 hour supermarket and laundry



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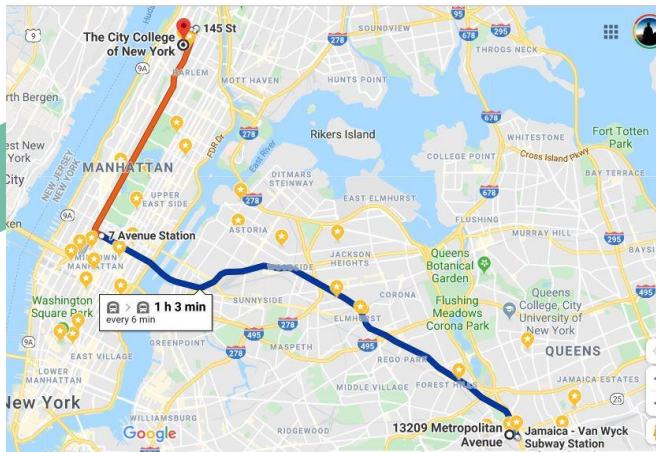
Cook and Food



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Commuting

50 mins subway and 5 mins bus



ADD A FOOTER



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Biomechatronics and Intelligent Robotics Lab

Led by Dr Hao Su

My main project aim is to set the motion capture system on one of lab's room.

Seminar by Prof. Minghui Zheng from Buffalo University about A Learning-Based Control Strategy for Robotic Systems and a seminar by Prof. Kyu-jin Cho from Seoul National University about Soft Robotics.

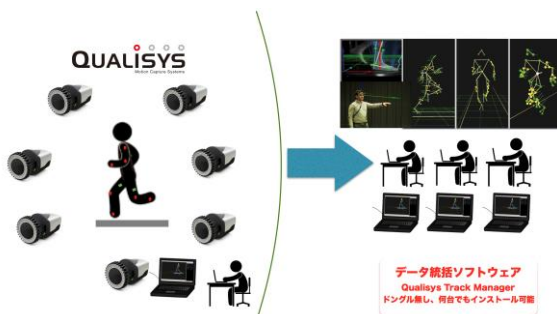
I helped research as a model for gait detection, and prepare groove of engineering anniversary's event



Dr Hao Su

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Installing the Qualisys Motion Capture System



Motion capture is the process of recording the movement of objects or people.

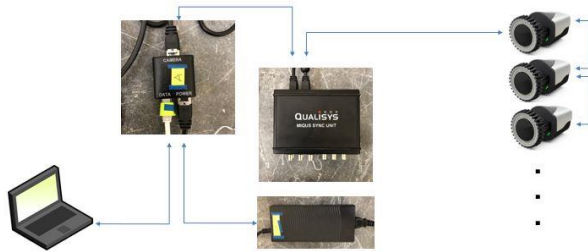
In this lab, it will help measure and analyse human motion to help student members' research, such as soft exoskeleton for human augmentation and restoration. Qualisys system help to evaluate the eco or algorithm.

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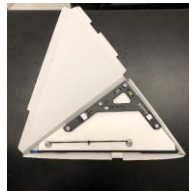
Installing the Hardware

Hardware Structure

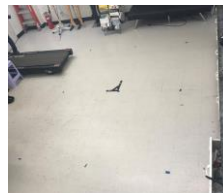


We use Qualisys Track Manager software and 8 Miquis cameras on the lab

Calibration



Calibration kit

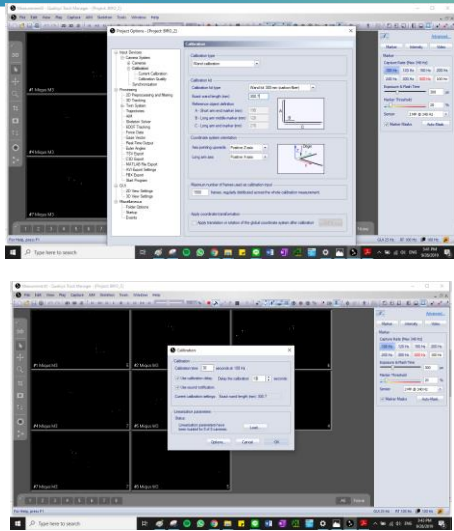


Volume of Interest



grab the wand kit for calibration

Calibration



Calibration Results

Calibration passed

Camera results

Camera	X (mm)	Y (mm)	Z (mm)	Points	Avg. residual (mm)
01	252.46	2025.03	2721.87	416	0.37233
02	228	1407.12	2775.81	768	0.1102
03	3225.13	641.87	2714.87	642	4.83922
04	262.36	1128.42	254.91	1431	3.64228
05	2826.00	626.76	2721.83	1326	2.47118
06	1742.51	1171.89	3270.42	1276	2.69125
07	3052.28	3446.77	2728.21	1137	2.21895
08	2814.13	1370.42	2762.83	760	2.21588

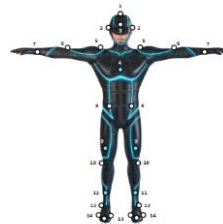
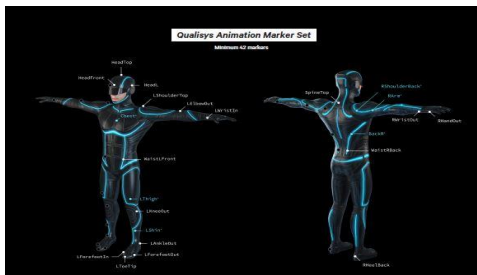
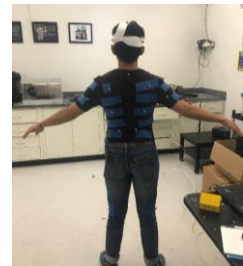
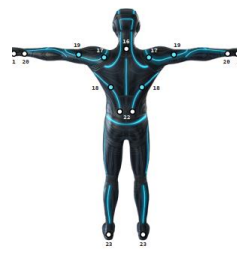
Standard deviation of wand length: 0.0670 (mm)

Calibration carried out: 2019-09-26 16:30:55

Buttons: Export, Use Calibration, New Measurement, OK

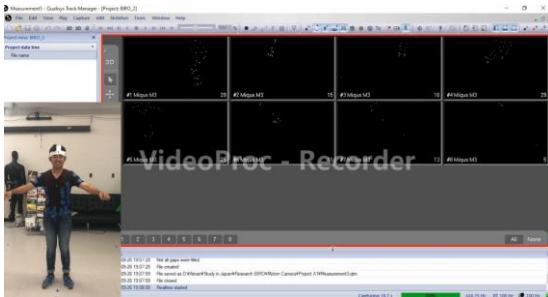
Sensors

Small grey sphere for detecting segments of the subject

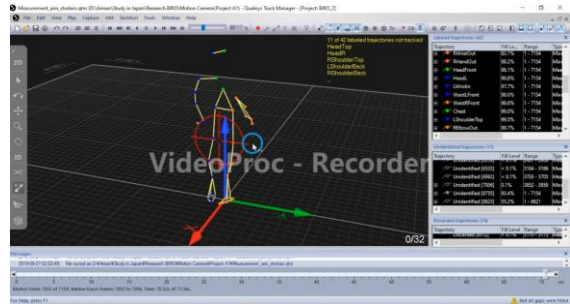




Making AIM Model



Analyze real time



Making stick figure

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What I learnt

- The lab don't expect you to be there all day
- Discuss progress and target every week with professor
- Lab members advised me a lot about researching and studying
- Good opportunity to meet and have connection new people and
- My English improved because they often correct me
- A good start before I do research in B4



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Advices for future participant

- Prepare well (months before)
- Get to know CUNY students who are attending short program in TUT
- Don't afraid to speak English
- Try to make many friends there, don't just hang out with each other
- Don't afraid to ask

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**THANK
YOU!**