ZIYU LIU

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EDUCATION

Cornell Tech at Cornell University   Aug. 2019 - May. 2020
Master of Engineering in Computer Science

Rensselaer Polytechnic Institute   Sep. 2015 - May. 2019
Bachelor of Science in Electrical Engineering dual Computer Engineering   GPA: 3.75 / 4.00
Undergraduate Teaching Assistant in Embedded Control, Dean Honor List

SKILLS

Courses: Data Structure, Algorithm, Database System, Network and Distributed System, Web Developer(Udemy), Machine Learning, Intro to AI, Computer Vision, Virtual and Augmented Reality
Programming: Python, C/C++, C#, SQL, OpenCV, Django, JavaScript, Git, CSS, HTML, Node.js

EXPERIENCE

Undergraduate Researcher, Smart Conference Room, Troy, NY   Jan. 2018 - May. 2019
Reflected Light Sensing for Precision Occupancy and Location Detection in Smart Conference Room

· Developed an algorithm for tracking occupancy with **Python** and **OpenCV**
· Built different test rooms with **Unity** based on the performance of algorithm and real rooms
· Improved the bench-mark to **89%** accuracy and reduced **24%** energy usage
· Developed an **API** for communication between backend algorithm and Unity simulation in real time

Research Assistant, IBM, Troy, NY   Mar. 2017 - Aug. 2017
Enabled multi-modal group-computers dialog, learning and understanding of group activities, reasoning, planning and facilitation of collaborative decision-making

· Embedded the **Analogy Generation Engine** inside the Mandarin project
· Extracted data from **DBpedia** with **REST API** in knowledge-explore application using **JavaScript**
· Employed knowledge-explore application and improved accuracy by **10%** of the analogy engines with new comparison model

PROJECTS

Enedin, Arup (Full stack)   Aug. 2019 - Present
Develop a web application that provides customized recommendations towards building energy savings goals in a cheap and fast way

· Develop web application using **Django** and **AWS** with functional **database**
· Visualize energy data for buildings with **Google Maps API**
· Research on customer expectation and current solutions to generate experiment on prototype

Synesthesia, VR Immersive Music (VR)   Sep. 2019 - Presnet
Develop a VR application to improve the music-listening experience with Unity and Oculus Quest

· Decompose music based on frequency using FFT to align music with dance of gameobjects
· Improve user experience with haptic feedback and music quality based on the feedback on survey

Medicine Management, Albany Guardian Society (Full stack)   Sep. 2018 - Dec. 2018
Developed a functional automatic medication dispenser for senior citizens

· Implemented **Django** web application on **Raspberry Pi** with functional **database**
· Analyzed seniors requirements and designed the interface with bold text and an easy boot-up system using **JaveScript**
· Integrated calendar **API** for different groups of customers