Ouliang Jin

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EDUCATION

Columbia University,   Feb 2023

Master of Science in Mechanical Engineer (Robotics and Machine Learninng Concentration),   GPA:3.9/4.0.   New York, US

- *Coursework*: *Artificial Intelligence, Natural Language Processing, Robot Learning, Robot Studio, Evolutionary Algorithm, Data science, Internet of things*

Huazhong University of Science and Technology (HUST)   Jun 2021

Bachelor of Mechanical Design, Manufacturing and Automation,   GPA: 3.6/4.0.   Wuhan, China

INTERN AND EXPERIENCE

Habit Developer Box Application   May 2022 - Dec 2022

On Task Technologies, SDE Intern   **New York, USA**

- Developed a Flask backend to implement intelligent recognition process and data interactions between Onenet IOT Platform, local and online databaes
- Created a web-based user interface with Vue frame based on HTML/CSS and Javascript
- Built APIs(python and C/C++ based) connecting backend to local Sqlite, Google Cloud Platform Mysql database and Onenet IOT Platform to manage user data
- Troubleshooted errors and fixed bugs of the whole application
- Applied for an invention patent and a utility model patent as one of inventors

Intelligent Production of Precast Box Girder Reinforcement Engineering.   Nov 2020 - Jan 2021

  China Railway Group 12th Bureau Co., Ltd. , Intern   **Shanwei, China**

- Designed a C/C++ program to simulate logistics and equipment work in order to check work efficiency and optimize the synergistic operation scheme of different units
- Led a team of 20 to investigated traditional production mode of Railway Precast Box Girder Reinforcement Engineering and proposed an innovative implementation methods of automatic production, reducing the stuff size from more than 100 to less than 20 theoretically
- Utilized Solidworks, Ansys and AutoCAD to design hardware structures(Conveying mechanism and shelves) of an ASRS for more than 50 kinds of finished reinforcement within a limited space and checked mechanical properties of main parts

PROJECTS AND RESEARCH

Depth Camera 3D location rebuilding and human body point estimation

Columbia University, Sunil K Agrawal Roar Laboratory   Feb 2022 - May 2022

- Built a python deep learning model with tensorflow to rebuild 3D location from point cloud data collected from depth camera and estimate cerebral palsy patients' body key points in order to support Physiotherapist's treatment

Soft Robot Evolution programming   Sep 2021 - Dec 2021

- Designed an application based on C/C++ and evolution algorithm independently to realize automatic evolution of a soft robot on both structural and functional level
- Displayed the 3D soft robot models with OpenGL consecutively to show the process of the robot evolution

Underwater Micro-robot (The Flagellated Motor Model Research),

California Institute of Technology, Research Assistant, Testing Technician   Mar 2020 - Nov 2020

- Compiled a Matlab program with GUI for speed simulation and model's pitch angle optimization calculation based on Traditional Resistive Force Theorem
- Proposed a verification for application feasibility of Buckingham Pi Theorem in Scaled Model of Flagellated Swimmer Design, comparing theoretical calculation with test results, and publish a paper on Modern Mechanical Engineering (ISSN Online: 2164-0181, Paper ID: 1860497, DOI: 10.4236/mme.2021.113004)

SKILLS

Compiling Language   : C/C++, Python, Git, SQL, Javascript, HTML/CSS

Application Framework   : Vue, Mui, Flask