Minglun Tang

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EDUCATION

Columbia University, Master's Degree   New York**,** NY, Sept. 2018 - Present
• Major: Mechanical Engineering, concentrating on robotics and control
• Main courses: Database, Artificial Intelligence, Robotics, Robot Learning, Data Mining

Wuhan University of Technology, Bachelor's Degree   Wuhan, China, Sept. 2014 - June 2018
• Major: Automotive Engineering
• Main courses: Automobile Construction, Theory of Vehicle, CAD/CAE of Automobile, Electronic Control

University of Michigan   Dearborn, MI, Sept. 2017 - Apr. 2018
• Major: Mechanical Engineering
• Main courses: Acoustic and Noise Control, Design and Analyze of Mechanical Elements, Thermal Fluid Sciences

INTERNSHIP

Authentise Inc, Backend Software Engineer Intern   Philadelphia, PA, May 2019 - Aug. 2019
• Developed new features for the web software that is used in additive manufacturing industry. I mainly wrote 3 functions: format conversion, 3D nesting and Netfabb Forge. The format converter can convert STL format to 3MF format. 3D nesting is a function to pack a bunch of models in a build volume to minimize the material waste. And the Netfabb Forge is to use Autodesk Forge API to connect our software to A360 cloud so that users can import models to our website from the cloud, and export models to Netfabb from our website.
• Improved the time estimator that used for printing time prediction using machine learning knowledge.
• Fixed bugs in backend. Reviewed peers' code. And did testing.
• Programmed in Python and Go. Accumulated abundant experience in using GitHub, Docker Image, Pytest, Jenkins, Blender and so forth.

SAIC General Motors Corporation Limited, Dimensional Engineer Intern   Wuhan, China, July 2017 - Aug. 2017
• Used checking fixture to verify dimensions on parts.
• Evaluated inspection data collected by VISION (On-line Measuring System) and analyzed the data accumulated by Coordinate Measuring Machine to identify trends.

PROJECTS

Robot Learning   New York**,** NY, Jan. 2019 – Present
• Used a glove which has many sensors to collect a dataset of a person grasping various objects and used clustering to train the data. And when new data came on, use machine learning to predict the object grasped by hand.
• Built and trained a deep neural network to predict the movement of a 3-joint robot arm.
• Implemented Deep Q-learning algorithm to control a two-wheeled robot to keep balance.

Robotics Simulation   New York**,** NY, Sept. 2018 - Dec. 2018
• Implemented the RRT algorithm on a 7-joint Kuka robot arm for obstacle avoidance and motion planning.
• Created an Extensive Kalman Filter for a moving robot to estimate its real time position.
• Used ROS in Linux system to complete the project. Used tools including URDF, RViz and MoveIt. Coded in python for all the algorithms.

STUDENT GROUP LEADERSHIP

Student Union, Chief of Department of Social Practice   Wuhan, China, Sept. 2015 - June 2016
• Negotiated with companies to offer internship opportunities and led 3 teams more than 50 students to intern at 3 companies respectively.

Chinese Scholars and Students Association, Propaganda Minister   Dearborn, MI, Oct. 2017 - May 2018
• Leaded the filming of the promotional video of 2018 Spring Festival Gala.
• Operated the WeChat public account of CSSA. Doubled the average reading volume during that period.

SKILLS

• Programming Language: Python, Golang, Java   • Web Technologies: HTML, CSS
• Data Management: MySQL, MySQL Workbench   • Operating System: Mac OS X, Linux, Windows
• Software: MATLAB, ANSYS, Blender, SolidWorks, Auto CAD, MS Office