Xuelong Mu

183 Washington Park, Brooklyn, NY 11205 | (724) 799-9061 | xuelongmu@gmail.com

EDUCATION

Columbia University – Columbia School of Engineering and Applied Science   **New York, NY**
Mechanical Engineering   May 2018
GPA: 3.87
Honors: *Cum Laude*, Tau Beta Pi, Pi Tau Sigma, Mechanical Engineering Department Certificate of Merit

WORK EXPERIENCE

Voodoo Manufacturing, *Robotics Engineer*   **New York, NY**
- Developed 6DOF robot system for trimming clear dental aligners with submillimeter   November 2019 – Present
precision using an ABB robot with the ROS framework (C++ and Python). Responsible for all aspects
including path planning, simulation, calibration, , digital I/O, and cloud integration using WebSockets.

DMC, Inc., *Systems Engineer*   **New York, NY**
- Built custom engineering solutions for test and measurement automation. Involved in   June 2018 – November 2019
system design, software programming, and onsite commissioning. Projects include:
    o .NET/C# desktop app with an EF6/SQL backend for controlling a torque calibration system.
    o React Native mobile app for automated pressure testing with a Bluetooth pressure transducer.
    o LabVIEW test stand for end-of-line verification of electric vehicle battery packs.
    o LabVIEW test stand for dimensional measurement and verification of catalytic converters.

Columbia University Robotics Group, *Research Assistant*   **New York, NY**
- Built a Node.js-based Alexa app for voice control of a MICO assistive robot arm.   September 2017 – December 2017
- Integrated an sEMG device with an Android app for Human-in-the-Loop control of a robot arm.

Voodoo Manufacturing, *Engineering Intern*   **New York, NY**
- Programmed a UR10 robot arm for a vision-based pick and place program used to operate   May 2017 – August 2017
a cell of 3D printers. Powered by ROS, OpenCV, and a Basler machine vision camera.
- Designed and built 3D-printed carts for storing and transporting printer plates around the factory floor.

Bridg-it, *Infrastructure Intern*   **New York, NY**
- Configured Docker to automate deployment of a PHP/MySQL/NGINX web app.   June 2015 – August 2015

ADDITIONAL PROJECTS

Healios, *Project Lead*
- Providing accessible, high-quality mental health care to victims of natural disasters by streamlining the process for case
workers to connect with survivors. IBM Call for Code 2019 Finalist (top 5 out of 5000+ entries).
    o Managed a team of developers and researchers to create a demo product. Developed React Native codebase.

Pottery Robot, *Electronics Lead*
- Designed, wired, and programmed a 4-axis robot that throws pottery into custom programmable curve profiles.

Light Umbrella, *Electronics Lead*
- Designed and programmed an LED umbrella that responds in real-time to rainfall intensity using a vibration sensor.

SKILLS

- Java | Python | JavaScript | C#/.NET | SQL | C++ | LabVIEW | MATLAB | Unix/Bash | Git/SVN
- ROS | OpenCV | Entity Framework | React | React Native | Node.js | WebSockets | SolidWorks | Fusion 360
- Unity VR | Unreal Engine | Premiere | 3D Printing | Maya | Houdini