

# Jiaoran WANG

[jiaoranw@usc.edu](mailto:jiaoranw@usc.edu) | TEL: 213-284-4964 | Los Angeles, CA

OBJECTIVE: Applying for 2021 Fall Mechanical Engineering Ph.D. Program

## EDUCATION BACKGROUND:

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09/2019-Present	<b>University of Southern California</b>	<b>Los Angeles, USA</b>
	✧ Major: Mechanical Engineering	
	✧ GPA: 3.75/4.0	
	✧ Degree: Master of Mechanical Engineering (expected in 05/2021)	
09/2015-07/2019	<b>Harbin Engineering University</b>	<b>Harbin, China</b>
	✧ Major: Flight Vehicle Design and Engineering	
	✧ GPA: 3.39/4.0	
	✧ Degree: Bachelor's Degree in Aerospace Engineering	

## SKILLS:

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- ✧ **Programming Language:** MATLAB-Simulink (proficient), Python (good at data structure), R/RStudio (familiar), C/C++(familiar), Octave (familiar)
- ✧ **CAD Software:** SolidWorks (proficient), Auto-CAD (proficient), UG-NX (familiar), CATIA (familiar)
- ✧ **Simulation Software:** ANSYS (proficient in APDL/FLUENT/CFX), COMSOL (familiar with Multiphysics)
- ✧ **Equipment:** 3D Printer(proficient), Laser Cutting Machine, CNC Machine and other machine tools
- ✧ **Algorithm:** Machine Learning Algorithm, Deep Learning Algorithm

## RESEARCH EXPERIENCES:

01/2020-Present	<b>Valero Lab (Brain-Body Dynamics Lab)</b>	<b>Los Angeles, USA</b>
	✧ Working on the design and strain gauges' signal testing of biomechanical leg.	
	✧ Using Machine Learning module in MATLAB to classify the observed signal	
01/2020-05/2020	<b>Center for Advanced Manufacturing (CAM at USC)</b>	<b>Los Angeles, USA</b>
	✧ Working on Additive Manufacturing 3D Printing of Conformal Antenna.	
	✧ Designed Arduino – Python UDP communication system for manually and remote control for robot 3D printing	
09/2019-11/2019	<b>Design Project on Automatic Test-tube Sorting System</b>	<b>Los Angeles, USA</b>
	✧ Put forward a design proposal using rollers and conveyers for rapid Test-tube Sorting System.	
	✧ Used OpenCV (visual image recognition technology) for tube identification	
02/2019-06/2019	<b>Outstanding Dissertation at Harbin Engineering University</b>	<b>Harbin, China</b>
	✧ Design and Experimental Study of Thermoelectric Structure in Aerospace Aircraft	
	✧ The thermoelectric piece architecture among annular thermoelectric module at gunship nozzle was designed, and the temperature difference experiment was carried out.	
	✧ Method to determine the optimal size based on the conversion efficiency extremum is proposed.	

## INTERNSHIP EXPERIENCES:

02/2019-03/2019	<b>Aviation Industry Corporation of China</b>	<b>Beijing, China</b>
	✧ Worked in the structure of transportation rocket projector and participated in the unit part grinding and assembly process	
08/2018-09/2018	<b>Shenyang Aircraft Corporation</b>	<b>Shenyang, China</b>
	✧ Visited the workshops of civil and military aviation and learnt practical aircraft manufacturing knowledge and skills as well as the differences in the procedures of manufacturing	

## EXCHANGE EXPERIENCES:

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02/04-03/03/2018	<b>International Programs in UC San Diego Extension</b> ✧ Program: English for Engineering and Technology ✧ Grade: A	<b>San Diego, USA</b>
01/20-02/07/2018	<b>Course Learning Program in The University of Minnesota</b> ✧ Department: Chemical Engineering and Material Science ✧ Core Courses: Reactor and reaction engineering, Chemical engineering laboratory, Numerical methods in chemical applications	<b>Minneapolis, USA</b>

### LISENCES & CERTIFICATES:

Issue Date	Name	Issuing Organization
06/2020	<b>R Programming</b> ✧ Credential: <a href="https://www.coursera.org/account/accomplishments/certificate/HH6LDFV5BNJA">https://www.coursera.org/account/accomplishments/certificate/HH6LDFV5BNJA</a>	Johns Hopkins University offered through Coursera
06/2020	<b>Capstone: Retrieving, Processing, and Visualizing Data with Python</b> ✧ Credential: <a href="https://www.coursera.org/account/accomplishments/records/F8YUUTWR7U6T">https://www.coursera.org/account/accomplishments/records/F8YUUTWR7U6T</a>	University of Michigan offered through Coursera
06/2020	<b>MATLAB-Machine Learning Onramp</b> ✧ Credential: <a href="https://matlabacademy.mathworks.com/progress/share/certificate.html?id=fedb0ed4-9b29-441a-8b4c-404c3f69b3ad">https://matlabacademy.mathworks.com/progress/share/certificate.html?id=fedb0ed4-9b29-441a-8b4c-404c3f69b3ad</a>	MATLAB-Online Training Service
06/2020	<b>MATLAB-Deep Learning Onramp</b> ✧ Credential: <a href="https://matlabacademy.mathworks.com/progress/share/certificate.html?id=9284795f-2558-4dcf-836b-1881ccc339a3">https://matlabacademy.mathworks.com/progress/share/certificate.html?id=9284795f-2558-4dcf-836b-1881ccc339a3</a>	MATLAB-Online Training Service
05/2020	<b>Using Python to Access Web Data</b> ✧ Credential: <a href="https://www.coursera.org/account/accomplishments/verify/2LWKRUUHV76G">https://www.coursera.org/account/accomplishments/verify/2LWKRUUHV76G</a>	University of Michigan offered through Coursera
05/2020	<b>Python Data Structures</b> ✧ Credential: <a href="https://www.coursera.org/account/accomplishments/verify/K2SS6NVE756G">https://www.coursera.org/account/accomplishments/verify/K2SS6NVE756G</a>	University of Michigan offered through Coursera

### PERSONAL INTERESTS

- ✧ Arduino programing for robot car control.
- ✧ Models (Keen on collecting Lego models of aerospace series).
- ✧ MIDI keyboard controller for electrical song arrangement.