

# Zhaoliang ZHENG

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## EDUCATION BACKGROUND

### **University of California, San Diego**

*September 2017-September 2019*

MS in Mechanical and Aerospace Engineering, expected September 2019 Cumulative GPA: 3.71/4.00

ECE-related courses: ECE 228:ML for Physical Applications, MAE 247:Coop Control/Multi-Agent System

### **Dalian University of Technology (DUT)**

*September 2013 –June 2017*

BE in Processing Equipment and Control Engineering

Cumulative GPA: 3.50/4.00

## RESEARCH EXPERIENCE

### **Bio-inspired robot program (projected-based course)**

*March 2018-June 2018*

- Programmed in python, and simulated the motion process for control endpoints of robots' legs
- Designed the mechanical structures for the robot, and assembled the robot
- Made adjustments and improvements to resolve the structural defects for the robot
- Conducted programming for the robot

### **Human Frontier program**

*March 2018-June 2018*

- Build 3D models for scanned pictures with Agisoft PhotoScan
- Prepared manual for end-users on using Agisoft PhotoScan to build 3D model for stumps
- Tested the influences of different imaging qualities on 3D modeling
- Inspired by GPS and found an innovative and effective approach to calculate the minimum scanned pictures required for 3D modeling

### **Project-Based Machine Learning Research Program—Fake News Detection**

Team Leader

*March 2018-April 2018*

- Conducted hyper-tuning to choose a set of optimal hyperparameters for the model of the classifier
- Processed news through integrating multiple Natural Language Processing methods, including text: doc2vec+title: word2vec,extended doc2vec, and TF-IDF+doc2vec
- Prepared the whole pipeline to process and classify original material of news

### **Ships Identification in Satellite Images (Machine learning project-based course)**

Team Leader

*March 2018-April 2018*

- Processed image data through multiple classifiers, including: XGBoost, random forest, Convolutional Neural Network with Stochastic Gradient Descent
- Compared different methods and result discussion
- Poster design and 60 percent of paper writing

## Patent

Multifunctional Doula Chair for pregnant woman (designed and modeled with Inventor)

To be submitted for approval of State Intellectual Property Office of the P.R.C in 07/28/2018

## Thesis

Position and attitude control of ROV based on dynamic positioning system

➤ Has been published in Dalian university of technology

BTT/STT Missile Switching Control Design

➤ To be submitted to EI International Conference in 10/2018

## HONORS AND AWARDS

**Outstanding Undergraduate Thesis**, DUT, (3% of all the DUT students)

*June 2017*

**Academic Excellence Scholarship** 2015-2016 (15% of all the DUT students)

*October 2016*

**First Prize**, 2016 Mathematical Contest in Modeling, ( 5% of all the Contestants)

*February 2016*

**Scientific Innovation Scholarship** 2014-2015 (4% of all the DUT students)

*October 2015*

## SKILLS AND QUALIFICATIONS

- **Computer**—C Language( 5 years ), python, Matlab( 3 years ), Simulink( 3 years ), CAD( 5 years ), Inventor 3D ( 5 years ), Solidworks ( 2 years ), LaTeX, Agisoft photoscan, and Max Misher
- **Qualifications**—CLAD(Certified LabVIEW Associate Developer)