

# Hejia Zhang

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## EDUCATION

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### University of Southern California

*Los Angeles, USA*

M.S. IN COMPUTER SCIENCE (INTELLIGENT ROBOTICS)

*Jan. 2018–PRESENT*

**Selected Courses** Robotics Analysis of Algorithms

### Zhejiang University

*Hangzhou, China*

B.E. IN BIOENGINEERING

*Sept. 2013–July. 2017*

**Honor** Second-Class Scholarship for Outstanding Merits, Zhejiang University  
Third-Class Scholarship for Outstanding Merits, Zhejiang University

2013–2014  
2015–2016

## PROFESSIONAL EXPERIENCE

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### Shuneng Technology LLC

*Hangzhou, China*

*Intern Data Analyst*

*July. 2016–Sept. 2016*

- Assisted in data retrieval and movie box performance prediction for all movies for all cinemas in China
- Assisted in analyzing data including media indices, box presales, types, casts of the movies and their box performance using Artificial Neural Network
- Wrote a report about the results of box office performance forecasting

### Seeta Technology Co., Ltd

*Peking, China*

*Software Engineer*

*June. 2017–Dec. 2017*

- Implemented a face access control system based on boost.asio, Poco Library and Face Recognition technology
- Improved and maintained the functionality, stability and availability of the face recognition platform which provides the basic face detection, face recognition and feature management api and is used in every project in company
- Participated in developing a data annotation platform in Python with Tornado

## ACADEMIC EXPERIENCE

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### Undergraduate Research, Institute of Biosystem Automation and Information Technology (Prof. Hui Fang)

*Zhejiang University, Hangzhou, China*

*Researcher for "Desktop Application for Processing Plants Point Cloud Data"*

*Feb. 2016–June. 2017*

- Responsible for the Graphical User Interface and several function modules of the application like leaf area measurement, plants height measurement
- Developed the Graphical User Interface in C++ with Qt and the processing function modules with PCL
- Provided the application to producers and scientists for processing the plants point cloud data with ease and speed

## 2016 ASABE Robotics Student Design Competition

Orlando, USA

Designer & Programmer

March. 2016–July. 2016

- Responsible for the design and programming of a fully automated robotic system that can simulate the transfer of fruits from the harvester to the processing plant
- Developed the control system on Arduino Mega 2560 and realized the vision system in C++ with OpenCV on Raspberry 3 Model B
- Designed a manipulator that can grab the target and suck the target into a storage compartment inside the robot

## 2015 National Intelligent Agricultural Equipment Innovation Competition for College Students

Jiangsu, China

Designer & Programmer

Oct. 2015–Dec. 2015

- Responsible for the design and programming of a fully automated robotic system that can simulate the tractors traversing in field which can avoid obstacles automatically
- Developed the path planning algorithm on Arduino Mega 2560 combined with information from infra-red sensors and ultrasonic sensors
- Won the 2nd prize in the competition

## Undergraduate Research Internship, Bhalerao Lab (Prof. Kaustubh Bhalerao, Dr. Abhishek S. Dhoble)

University of Illinois at Urbana-Champaign, USA

Researcher for "Modeling Microbial Diversity of Anaerobic Digestion through STELLA" July. 2015–Aug. 2015

- Responsible for a methodology to account for microbial diversity in complex but structured models and the resulting model remains powerful in representing macroscopic experimental data, but is moreover able to get insight in underlying microscopy
- Adaptation of microorganisms to perturbations and inhibitory substances, as suggested in this model, can significantly improve anaerobic digestion process and thereby wastewater treatment efficiency
- Constructed the visual mathematical model with tool of STELLA

## SKILLS

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**Programming Languages** C/C++ Python Matlab Shell Scripting

**Network Programming Libraries** Poco (C++) Tornado (Python) Mosquitto Boost.Asio

**Computer Vision Programming Libraries** OpenCV Point Cloud Library (PCL)

**Machine Learning Libraries** TensorFlow Scikit-Learn

**Robotics Development Framework** Robot Operating System (ROS)

## REFERENCES

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- Dr. Hui Fang **Associate Professor of Zhejiang University** China
- Dr. Huanyu Jiang **Professor of Zhejiang University** China
- Dr. John Zhang **President of Systems Analytics Inc.,** USA