



# Yantian Zha

*Yochan Lab*

*Arizona State University*

*(480) 635-6431*

*[yantian.zha@asu.edu](mailto:yantian.zha@asu.edu)*

## OVERVIEW

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PhD student in Computer Science, who is interested in planning, vision, and their integrations that improve the cognitive abilities of robots.

## EDUCATION

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### PhD in Computer Science, Artificial Intelligence

2017-Present

*Arizona State University*

- Research Advisor: Prof. [Subbarao Kamphampati](#)
- Relevant Coursework: CSE 591 Intelligent Assistive Robotics (A); CSE 591 Advances in Robot Learning (A-); CSE 530 Embed Operating Sys Internals (B+); PHY 576 Quantum Theory (B-).
- GPA: 3.51/4.0

### MS in Computer Engineering, Computer Systems

2015-2017

*Arizona State University*

- Research Advisor: Prof. [Subbarao Kamphampati](#)
- Relevant Coursework: Human Aware Robotics (A); Statistical Machine Learning (A-).
- GPA: 3.38/4.0

### BE in Electronics Engineering, Automation

2010-2014

*Southeast University Chengxian College*

- Research Advisor: Prof. [Xudong Ma](#)
- Relevant Coursework: Advanced Mathematics (85), Probability & Mathematical Statistics (87), College Physics (91.5), C Programming (88), Embedded Systems (85), Microcomputer: Principles And Application (88), Sensor and Detection Technology (75), Signals and Systems (88), and Fundamentals of Software Technology (84)
- GPA: 83.59/100

## RESEARCH PROJECTS

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### User Modelling for Task and Motion Planning

*Yochan Lab, Arizona State University*

2018.9-2019.3

*Mentor: Prof. [Subbarao Kamphampati](#) and Prof. [Siddharth Srivastava](#)*

### Integrating Vision and Planning

*Yochan Lab, Arizona State University*

2017.6-2018.12

*Mentor: Prof. [Subbarao Kamphampati](#) and Prof. [Baoxin Li](#)*

- **Recognizing plans by learning embeddings from observed action distributions**  
Proposed and developed the Distr2Vec model to address the problem of learning shallow planning models from distribution sequence inputs  
This work is published in AAMAS, 2018
- **Plan Recognition Driven Attention Modelling for Visual Recognition**  
Proposed and developed the Pixel Dynamics Network for generating plan recognition driven attention maps  
The work is accepted by AAAI Workshop on Plan, Action, and Intention Recognition (PAIR) in 2019.

### Development of Service Software for Demonstrating Plan Explicability

*Yochan Lab, Arizona State University*

2016.9-2016.12

*Mentor: Prof. [Subbarao Kamphampati](#) and Prof. [Yu Zhang](#)*

Developed a software for Fetch robot to perform service in an explicable way. The software is used for evaluating our paper [Explicability as Minimizing Distance from Expected Behavior](#). Here is the [link](#) to our demo video

### Development of Grasping Module for Baxter Robot

*Yochan Lab, Arizona State University*

2015.9-2016.1

*Mentor: Prof. [Subbarao Kamphampati](#) and Prof. [Yu Zhang](#)*

Developed a robotic grasping module for a [Baxter Research Robot](#). The algorithm is based on stable grasping handle prediction, template-based object recognition, and object point cloud segmentation and extraction. Here is a [link](#) to my demo video..

### Development of Service Software for Mobile Robots (Bachelor Thesis)

*Intelligent Robot Lab, Southeast University*

2014.2-2014.5

*Mentor: Prof. [Xudong Ma](#) and Prof. [Kun Qian](#)*

Developed a service robot system, which includes navigation, object detection, manipulation control, and Unified Robot Description Format (URDF) programming. Applied the system to a [turtlebot 2](#) and a [Phantomx Pincher arm](#).

## CONFERENCE AND JOURNAL PAPERS [\[dblp\]](#)

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5. [Zha, Yantian, Bhambri, Siddhant, and Guan, Lin](#), “[Contrastively Learning Visual Attention as Affordance Cues from Demonstrations for Robotic Grasping](#)”, *The IEEE/RSJ International Conference on Intelligent Robots and Systems* , IROS (2021).
4. [Zha, Yantian, Li, Yikang, Yu, Tianshu, Kamphampati, Subbarao and Li, Baoxin](#), “[Plan-Recognition-Driven Attention Modeling for Visual Recognition](#)”, *Plan, Activity, and Intent Recognition (PAIR) Workshop* , AAAI (2019).
3. [Zha, Yantian, Li, Yikang, Gopalakrishnan, Sriram, Li, Baoxin, and Kamphampati, Subbarao.](#), “[Recognizing plans by learning embeddings from observed action distributions.](#)”, *In Proceedings of the 17th International Conference on Autonomous Agents and Multi Agent Systems* **2153-2155**, International Foundation for Autonomous Agents and Multiagent Systems (2018).

2. Zhuo, Hankz Hankui, [Zha, Yantian](#) and Kambhampati, Subbarao, “[Discovering Underlying Plans Based on Shallow Models](#)”, *In Proceedings of ACM Transactions on Intelligent Systems and Technology (TIST)* **finalized journal version to come**, (2019).
1. Kulkarni, Anagha, [Zha, Yantian](#), Chakraborti, Tathagata, Vadlamudi, Satya Gautam, Zhang, Yu and Kambhampati, Subbarao, “[Explicability as Minimizing Distance from Expected Behavior](#)”, *Explainable AI Planning (XAIP) Workshop* , ICAPS (2018).

## INVITED TALKS AT INTERNATIONAL CONFERENCES

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2. AAAI 2019 Workshop on Plan, Activity, and Intent Recognition, Honolulu, USA, January 28
1. ICML / IJCAI / AAMAS 2018 Workshop on Planning and Learning (PAL-18) Workshop, stockholm, Sweden, July 15

## INDUSTRY EXPERIENCES

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### ABB Corporate Research Center in the United States

*Worked as a robotics research intern*

2020.3-2020.8

*Mentor: Dr. [Jianjun Wang](#)*

My intern projects are confidential. One of them could potentially be a paper if I spent time making my own dataset.

## AWARDS AND CERTIFICATES

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- 2021 Awarded the CIDSE Doctoral Fellowship by Arizona State University
- 2007 [CERTIFICATE OF ARTS GRADE EXAMINATION OF CHINA \(Piano, Ten/Top-level\)](#), THE MUSICIANS ASSOCIATION OF JIANGSU PROVINCE, License 200703201-010309
- 2014 Awarded Excellent Undergraduate Student in Southeast University
- 2012 Awarded SEU Second Class Scholarship for Academic Achievement (Top 10%)
- 2011 Awarded SEU First Class Scholarship for Academic Achievement (Top 3%)
- 2011 Course Scholarship in C Programming
- 2011 SEU Merit Student Scholarship

## SKILLS

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- Expert on [Robot Operating System](#), [PyBullet](#) [TensorFlow](#) and [PyTorch](#)
- [iGibson](#) and [fast-downward](#)
- Have solid knowledge on robotics, neural networks, planning, reinforcement learning, and computer vision