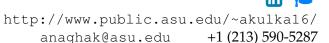
# ANAGHA KULKARNI

PhD student, Computer Science Arizona State University



# Seeking a research intern position for Summer 2019 RESEARCH INTERESTS

- ▶ Human-aware AI Planning, Explainable AI Planning, Intention Projection
- ▶ Privacy Preservation for AI Systems, Decision-Making & Behavior Prediction

#### **EDUCATION**

PhD in Computer Science, GPA: 4.0/4.0

Fall 2015 – Expected Fall 2020

Arizona State University, Tempe, AZ

M.S. in Computer Science

*Interfaces & Scheduling & Planning.* 

Fall 2013 – Spring 2015

University of Southern California, Los Angeles, CA

**B.E.** in Computer Science and Engineering

Fall 2009 – Spring 2013

Visvesvaraya Technological University, India

### **PUBLICATIONS**

- 1. A Unified Framework for Planning in Adversarial and Cooperative Environments

  A. Kulkarni, S. Srivastava, & S. Kambhampati, to appear in Proceedings of AAAI 2019, also appeared in the International Conference on Automated Planning and Scheduling (ICAPS) 2018 Workshop on Planning and Robotics.
- 2. **Resource Bounded Secure Goal Obfuscation A. Kulkarni**, M. Klenk, S. Rane, & H. Souroush, appeared in the AAAI 2018 Fall Symposium on Integrating Planning, Diagnosis and Causal Reasoning.
- 3. Projection-Aware Task Planning and Execution for Human-in-the-Loop Operation of Robots in a Mixed-Reality Workspace 
  T. Chakraborti, S. Sreedharan, A. Kulkarni, & S. Kambhampati, in Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2018, also appeared in HRI 2018 Workshop on Virtual, Augmented and Mixed Reality for Human-Robot Interaction, and in ICAPS 2018 Workshop on User
- 4. Explicability as Minimizing Distance from Expected Behavior A. Kulkarni, Y. Zha, T. Chakraborti, S. Vadlamudi, Y. Zhang, & S. Kambhampati, in the International Conference on Automated Planning and Scheduling (ICAPS) 2018 Workshop on Explainable AI Planning.
- Augmented Workspace for Human-in-the-Loop Plan Execution
   T. Chakraborti, S. Sreedharan, A. Kulkarni, & S. Kambhampati, in ICAPS 2017 Workshop on User Interfaces & Scheduling & Planning; also in ICAPS 2017 System Demonstrations and Exhibits.
   [Media Coverage: U.S. Microsoft Imagine Cup 2017 Finalist, PBS 8 Cronkite News, ASU Fulton School News, ACM Tech News]
- 6. Plan Explicability and Predictability for Robot Task Planning. Y. Zhang, S. Sreedharan, A. Kulkarni, T. Chakraborti, H. H. Zhuo, & S. Kambhampati, in Proceedings of the IEEE International Conference on Robotics and Automation (ICRA) 2017, and also appeared in Robotics: Science and Systems (RSS) 2016 Workshop on Planning for Human-Robot Interaction: Shared Autonomy and Collaborative Robotics.
- 7. Explicable Plans for Human-Robot Teams

  A. Kulkarni, in AIJ Student Spotlight, Robotics: Science and Systems (RSS) 2016 Workshop on Planning for Human-Robot Interaction: Shared Autonomy and Collaborative Robotics.

### **EXPERIENCE**

**Research Intern**, Palo Alto Research Center (PARC) at System Sciences Lab, under the supervision of Dr. Matthew Klenk

Summer 2018

• Explored the security aspects of goal obfuscation planning and implemented an algorithm to achieve secure goal obfuscation in adversarial scenarios.

## Graduate Research Assistant, Arizona State University

Fall 2015 – Present

at Yochan Lab, under the supervision of Prof. Subbarao Kambhampati

- Developed a unified framework for achieving contrasting behaviors for an agent, such that maximizing the inherent uncertainty in the environment results in obfuscating behavior, while minimizing it leads to legible behavior.
- Developed a planner for generating explicable plans given model based discrepancies between agent-human decision models.

**Graduate Research Assistant**, University of Southern California at Interaction Lab, under the supervision of Prof. Maja Mataric

Spring 2014 – Spring 2015

- Implemented dialogue management system to learn the optimal policy for a dialogue flow model, represented as MDP (Markov Decision Process).
- Developed and deployed a tour planner as a ROS package with navigational & time constraints.

## Graduate Research Assistant, University of Southern California

Fall 2014

at IDM Lab, under the supervision of Prof. Sven Koenig & Dr. T. K. Satish Kumar

• Designed & implemented an algorithm to find an optimal assignment of robots to tasks, so as to minimize the *makespan* time. The robots and tasks were represented as nodes in an undirected weighted graph with tasks nodes as active components.

#### **SKILLS**

Python, Java, C++ Scikit-learn, Numpy, Matplotlib, Pandas, Matlab, R, MySQL

### **SERVICE / INVOLVEMENT**

Serving as Program Committee for AAAI 2019 and as Reviewer for ICRA 2019

Served as Sub-Reviewer for ICAPS 2018, ICAPS 2017, ICRA 2017

K-12 Education Outreach: Use of robotics to promote STEM at Grace Academy, Tempe.
 GPSA Student Volunteer: Judge for Teaching Excellence Award, ASU.
 AAAI Robotics Exhibition: Demonstrated interactive planning using blocks on Fetch robot.
 2017

TA for Intro to Artificial Intelligence: CSE 471/598 by Dr. S. Kambhampati Fall 2016, Fall 2015

K-12 Education Outreach: Volunteer judge, Global Conference on Educational Robotics (GCER) 2014

#### AWARDS

Travel awards from ICAPS 2018, ASU GPSA (2018, 2017), ASU Grace Hopper, AIJ (RSS 2016)

University Graduate Fellowship, ASU Spring 2018

CIDSE Doctoral Fellowship Award, ASU Fall 2015 – Spring 2016

Meritorious Student Scholarship, secured 1st rank to Dept of CS, GIT, India 2010-2013

Meritorious Student Scholarship, for academic year 2009-2010, GIT, India 2010