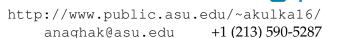
ANAGHA KULKARNI

PhD student, Computer Science Arizona State University



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 Arizona State University, Tempe, AZ

Fall 2015 – Expected Spring 2021

M.S. in Computer Science

Fall 2013 – Spring 2015

University of Southern California, Los Angeles, CA

B.E. in Computer Science and Engineering Visvesvaraya Technological University, India

Fall 2009 – Spring 2013

PUBLICATIONS

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

 A. Kulkarni, S. Srivastava, & S. Kambhampati, under review in AAAI 2019, and 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, under review in AAAI 2019, and 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 Interfaces & Scheduling & Planning.
- 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.
- 5. 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