

Aniruddh Gopinath Puranic

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EDUCATION

University of Southern California

PhD, Computer Science, GPA: 3.56/4.0

Advisor: Dr. Jyotirmoy V. Deshmukh, CPS-VIDA Group

Los Angeles, CA, USA

August 2019–Present

University of Southern California

M.S., Computer Science (Intelligent Robotics), GPA: 3.67/4.0

Los Angeles, CA, USA

December 2018

B.M.S. College of Engineering

B.E., Computer Science and Engineering, GPA: 8.84/10.0

Bangalore, India

June 2016

EXPERIENCE

CPS-VIDA Group at USC

Research Assistant

Advisor: Dr. Jyotirmoy V. Deshmukh

Research areas:

- o Verification of neural networks for safe control
- o Safe human-robot interaction: imitation learning, inverse reinforcement learning

Los Angeles, CA, USA

August 2019–Present

Toyota North America R&D - InfoTech Labs

Researcher (Intelligent Connected Systems)

- o Research and development on data-driven formal specification for connected vehicles.

Mountain View, CA, USA

April 2019–July 2019

Toyota InfoTechnology Center USA, Inc.

Research Intern (Systems and Software Division)

- o Supervisor: Dr. BaekGyu Kim

- o Research and development on data-driven formal specification for connected vehicles.

Mountain View, CA, USA

January 2019–March 2019

USC Keck School of Medicine

Research Volunteer at Center for Robotic Simulation and Education

- o Advisors: Dr. Andrew Hung (Norris Comprehensive Cancer Center) and Dr. Jyotirmoy V. Deshmukh

- o Developed a tool to estimate the deviation of surgical needle entry/exit points in dry-lab from images obtained from the Da Vinci surgical robot.

Los Angeles, CA, USA

June 2018–December 2018

University of Southern California

Course Producer

- o Robotics (CSCI 545) by Prof. Stefan Schaal

- o Introduction to Robotics (CSCI 445L) by Prof. Nora Ayanian

Los Angeles, CA, USA

Spring 2018

Fall 2018

SMERGERS

Software Engineer (Intern)

- o Developed a user interaction system using Python/Django framework for the initial prototype of 'Sector Watch Feature' which would provide a lot of insight about the businesses in a sector to the users in real time.

Bangalore, India

February 2015–May 2015

PUBLICATIONS

1. **Aniruddh Puranic**, Jian Chen, Jessica Nguyen, Jyotirmoy Deshmukh, and Andrew Hung. Poster: "Automated Evaluation of Instrument Force Sensitivity During Robotic Suturing Utilizing Vision-Based Machine Learning", *Journal of Urology*, 2019. Vol. 201, Supplement 4, Pgs. e505-e506.

2. Anand Balakrishnan, **Aniruddh G. Puranic**, Xin Qin, Adel Dokhanchi, Jyotirmoy V. Deshmukh, Heni Ben Amor, and Georgios Fainekos, "Specifying and Evaluating Quality Metrics for Vision-Based Perception Systems". *IEEE Proceedings of Design, Automation and Test in Europe (DATE)*, March 2019.
3. **Aniruddh Puranic**, Deepak K. T., and Umadevi V., "Vehicle number plate recognition system: A literature review and implementation using template matching." *International Journal of Computer Applications*, 134(1):12–16, January 2016. Published by Foundation of Computer Science (FCS), NY, USA.

CO-CURRICULAR ACTIVITIES

- o IEEE Student Member.
- o Reviewer
 1. IEEE Transactions on Intelligent Transportation Systems (T-ITS) 2020
 2. IEEE Transactions on Computers (IEEE Trans. Comput.) 2020
- o Sub-reviewer
 1. IEEE Conference on Decision and Control (CDC) 2020
 2. International Conference on Computer-Aided Verification (CAV) 2020
 3. Design Automation Conference (DAC) 2020
 4. International Conference on Cyber-Physical Systems (ICCPS) 2019
 5. IEEE International Conference on Cloud Computing (IEEE CLOUD) 2019
- o Attendee of WESTEC 2017 conference in Los Angeles.
- o Attendee of IEEE Vehicular Networking Conference 2019 in Los Angeles.