# Suraj Nair

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## SUMMARY


Caltech computer scientist with a focus on machine learning. Research experience in artificial intelligence, computer vision, and robot learning, specifically deep reinforcement learning and learning from visual demonstrations. Industry experience in building algorithms and software for large scale data analysis, specifically related to smart environments and Internet of Things.


## INDUSTRY & RESEARCH EXPERIENCE

06/17 – 12/17 **VISITING RESEARCHER**
Stanford Vision and Learning Lab (SVL)
Research in one shot visual imitation learning for robotics. Advised by Silvio Savarese and Fei-Fei Li.

04/16 – 06/18 **STUDENT RESEARCHER**
Decision, Optimization, and Learning at California Institute of Technology (DOLCIT)
Research in deep reinforcement learning for multi-agent games. Advised by Yisong Yue

03/17 – 09/17 **MACHINE LEARNING CONSULTANT**
Vizzario Inc.
Developed and implemented novel computer vision methods for facial tracking

10/16 – 06/18 **CALTECH REPRESENTATIVE TO OPENFOG**
California Institute of Technology | OpenFog Consortium
Facilitated and contributed to collaborative, fog computing related research projects

06/16 –09/16 **SOFTWARE DEVELOPMENT INTERN**
General Electric: Current by GE
Designed models for fault detection and time series forecasting and implemented them at scale

07/15– 09/15 **SOFTWARE ENGINEERING INTERN**
KloudData Inc.
Developed models to predict length of stay and admissions in hospitals

## PUBLICATIONS, TALKS, & POSTERS

10/2017 **Machine Learning: Applying Neural Networks in IoT Use Cases**
Internet of Things Solutions World Congress 2017 (Talk)
*S Nair, R Soley, J Paradiso, S Tabet, S Schneider*

09/2017 **Neural Task Programming: Learning to Generalize Across Hierarchical Tasks (Under Review)**
IEEE International Conference on Robotics and Automation 2018 (Paper)
Conference on Robot Learning 2017
*D Xu*, S Nair*, Y Zhu, J Gao, A Garg, L Fei-Fei, S Savarese*

11/2017 **Annotated Reconstruction of 3D Spaces Using Drones**
IEEE MIT Undergraduate Research in Technology Conference 2017
**Winner - Best Paper Presentation**
*S Nair, A Ramachandran, P Kundzicz*

05/2017 **Improving the Earthquake Early Response System Using Machine Learning**
Caltech Meeting of the Minds 2017 (Poster)
*A Ramachandran, S Nair, A Balakrishna, P Kundzicz, I Wang*

*Upcoming Planned Submissions:*

2018 **Grounded Neural Program Generation**
Robotics: Science and Systems 2018
*DA Huang*, S Nair*, D Xu, Y Zhu, A Garg, L Fei-Fei, S Savarese*

2018 **Multi Agent Option Learning for Team Planning**
Neural Information Processing Systems 2018
*S Nair, A Ramachandran, S Zheng, Y Yue*

## EDUCATION

09/14– 06/18 **B.S. Computer Science** **GPA: 3.8**
California Institute of Technology

09/13– 06/14 **High School** **GPA: 3.9**
Stanford Online High School

## TEACHING

01/17– 3/17 **Teaching Assistant: Machine Learning/Data Mining**
09/16– 12/16 **Teaching Assistant: Introduction to Relational Databases**
California Institute of Technology: Computer Science Department

## AWARDS, HONORS, & FELLOWSHIPS

11/2017 **Best Paper Presentation: IEEE MIT URTC 2017**
06/2017 **Caltech Summer Undergraduate Research Fellowship Recipient**
09/2016 **Winner: GE Digital Intern Hackathon**

## ACTIVITIES

2017-2018 **Title IX Advocate**
Caltech Title IX Program

2016-2017 **Math & Science Tutor**
Pasadena LEARNs Program