# SHIKHAR BAHL

(+1)510-990-5944 ⋄ Pittsburgh, PA
http://www.cs.cmu.edu/~sbahl2/

## EDUCATION

**Carnegie Mellon University, School of Computer Science** *August 2019 -*
PhD (Robotics Institute)

**University of California, Berkeley** *August 2015 - May 2019*
B.A. Applied Mathematics Cumulative GPA: 3.96/4
B.A. Computer Science
Graduated with Highest Disctinction in General Scholarship (Summa Cum Laude)

## EXPERIENCE

**Facebook AI Research** May 2022 -
*Visiting Researcher. Hosted by Aravind Rajeswaran*

**CMU (Robotics Institute)** September 2019 -
*Graduate Student Researcher. Advised by Deepak Pathak and Abhinav Gupta*

**NVIDIA Learning and Perception Group** May 2021 - September 2021
*Research Intern. Advised by Stan Birchfield and Jonathan Tremblay*

**Robotic and AI Learning Lab** January 2018 - August 2019
*Undergraduate Researcher. Advised by Sergey Levine and Ashvin Nair*

**UCSF - Savic Lab** April 2017 - August 2017
*Research Assistant. Advised by Rada Savic*

## PUBLICATIONS

**Human-to-Robot Imitation in the Wild**.
**Shikhar Bahl**, Abhinav Gupta*, Deepak Pathak*. *RSS 2022*.

**Dynamical Systems for Efficient Robot Learning**.
**Shikhar Bahl**, Abhinav Gupta, Deepak Pathak. *In submission to Autonomous Robots Special Issue.*

**RB2: Robotics Benchmarking with a Twist**.
Sudeep Dasari, Jianren Wang, Joyce Hong, **Shikhar Bahl**, Yixin Lin, Austin Wang,Abitha Thankaraj, Karanbir Chahal, Berk Calli, Saurabh Gupta, David Held,Lerrel Pinto, Deepak Pathak, Vikash Kumar, Abhinav Gupta. *NeurIPS 2021 Dataset Track*

**Hierarchical Neural Dynamic Policies**.
**Shikhar Bahl**, Abhinav Gupta, Deepak Pathak. *RSS 2021* (Invited to Autonomous Robots Special Issue)

**Neural Dynamic Policies for End-to-End Sensorimotor Learning**.
**Shikhar Bahl**, Mustafa Mukadam, Abhinav Gupta, Deepak Pathak. *NeurIPS 2020* (Accepted as a spotlight paper)

**State-Covering Self-Supervised Reinforcement Learning**. Vitchyr Pong*, Murtaza Dalal*, Steven Lin*, Ashvin Nair, **Shikhar Bahl**, Sergey Levine. *ICML 2020*

**Solving Industrial Automation Tasks with Natural Rewards Using Residual Reinforcement Learning**. Gerrit Schoettler*, Ashvin Nair*, Jianlan Luo, **Shikhar Bahl**, Juan Aparicio Ojea, Eugen Solowjow, Sergey Levine. *IROS 2020*

**Contextual Imagined Goals for Self-Supervised Robotic Learning**. Ashvin Nair*, **Shikhar Bahl***, Alexander Khazatsky*, Vitchyr Pong, Glen Berseth, Sergey Levine. *CoRL 2019*

**Residual Reinforcement Learning for Robot Control**. Tobias Johannink*, **Shikhar Bahl***, Ashvin Nair*, Jianlan Luo, Eugen Solowjow, Sergey Levine. *ICRA 2019*

**Visual Reinforcement Learning with Imagined Goals**. Ashvin Nair*, Vitchyr Pong*, Murtaza Dalal, **Shikhar Bahl**, Steven Lin, Sergey Levine. *NeurIPS 2018* (Accepted as a spotlight paper)

**Impact on inequities in health indicators: Effect of implementing the integrated management of neonatal and childhood illness programme in Haryana, India**. S Taneja, **S Bahl**, S Mazumder, J Martines, N Bhandari, MK Bhan, *Journal of Global Health* 2015 Jun; 5(1): 010401. doi: 10.7189/jogh.05.010401

## INVITED TALKS

**Hierarchical Neural Dynamical Policies** March 2021 - May 2022
*Cognitive Assistive Robotics Lab, University of New Hampshire*
*Columbia Artificial Intelligence Lab, Columbia University*
*Intelligent Autonomous Systems Group, TU Darmstadt*
*Manipulation Discussion Group, CMU*
*Robots Percieving and Doing (R-PAD) Lab, CMU*
*DARPA Machine Common Sense Group, CMU*

## SERVICE AND LEADERSHIP

**Undergrad Research**: Mentoring Aditya Kannan (CMU)

**Reviewer**: Reviewer for NeurIPS, RSS, CVPR, ICCV, ECCV, CoRL, ICML, ICLR, RA-L, ICRA, IROS

**Mentor**: Mentor for CMU AI Mentoring Program

## TEACHING

**Head Teaching Assistant**: Learning Embodied Agents and Perception (CMU, Fall 2021)

**Teaching Assistant**: Statistical Techniques in Robotics (CMU, Fall 2020)

**Teaching Assistant**: Optimization Models (UC Berkeley, Fall 2018)

**Reader**: Algorithms (UC Berkeley, Spring 2018)

**Reader**: Discrete Math and Probability (UC Berkeley, Fall 2017)

## AWARDS AND HONORS

Highest Disctinction in General Scholarship (Summa Cum Laude)

Phi Beta Kappa

Dean's Honors List, Fall 2015 to Fall 2018, UC Berkeley

Upsilon Pi Epsilon, CS Honor Society, UC Berkeley

## COURSES

Adaptive Control and RL*, Computer Vision*, Convex Optimization*, Advanced Machine Learning*, Kinematics, Dynamics and Control*, Deep Reinforcement Learning*, Machine Learning, Probability and Stochastic Processes, Optimization Models, Operating Systems, Advanced Data Science, Numerical Analysis, Real Analysis, Complex Analysis, Advanced Linear Algebra

* *indicates graduate courses*