# Utkarsh Patel

U.S. Citizen

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https://www.linkedin.com/in/utkarsh-patel/ | http://github.com/utkarshjp7/


## EDUCATION

**University of Southern California,** Los Angeles, CA
M.S. Computer Science (Intelligent Robotics)
GPA: **3.33** | Aug 2018 - May 2020

**Cleveland State University (CSU),** Cleveland, OH
B.S Computer Science
GPA: **3.78** (Magna Cum Laude) | Jan 2014 - May 2018

## APPLIED SKILLS

- **Programming Languages**: Python, C++. Java, C#, C, SQL, HTML, JavaScript
- **Frameworks / OS**: ROS (Robot Operating System), MoveIt, TensorFlow, PyTorch, Linux
- **Other**: MuJoCo, Gazebo, Rviz, Docker, NodeJS, MongoDB, PostgreSQL

## WORK EXPERIENCE

**Machine Learning Intern**, *Zillow Group*, San Francisco, CA. May 2019 – Aug 2019

- Developed natural language search for Zillow that will support over 190M users' search queries.
- Designed deep learning models to find entities (location, price etc.) from a search query. *[Python, PyTorch]*

**Robotics Research Assistant**, *Robotic Embedded Systems Lab*, USC, Los Angeles, CA. Sep 2018 – April 2019

- Designed and built an object detection/manipulation system for Sawyer robot. *[ROS, Python, MoveIt]*
- Created simulation environments for Sawyer robot with MuJoco and OpenAI Gym interface.
- Created Docker images to run Reinforcement Learning algorithms with the Sawyer robot and simulation.

**Robotics Research Assistant**, *Cleveland State University*, Cleveland, OH. Aug 2016 – Aug 2017

- Built a full-stack autonomous navigation application for Beam+ Robot (SuitableTech). [*ROS, C++. Python, Linux*].
- Reverse engineered Beam+ Robot's motor controller and integrated it with ROS to make it autonomous.

**Software Engineer Intern**, *TimeKeeping Systems Inc.*, Solon, Ohio. Jan 2016 – Jul 2018

- Developed Android app for recording wellbeing checks via NFC tags and barcodes (used in 40K correctional facilities)
- Implemented all layers from database and data access through services to view models and views. [C#, SQLite]
- Automated the process of deploying company's website with microsoft release management tools.

## ACADEMIC PROJECTS

**Generative model with Few-shot Meta-learning,** USC, mentored by Dr. Joseph Lim Jan 2019 - May 2019

- Found a way to generate synthetic images with only a few training examples with meta learning (learning to learn).
  *Tools Used*: Python, Tensorflow | *Project URL: https://github.com/usc599resl/mlgm*

**ShareSci: An Intelligent Full-Text Search Engine**, CSU, mentored by Dr. Sunnie Chung Aug 2017 – May 2018

- Built a search engine for research papers to simplify the process of literature review.
- Trained deep learning models to build document search, and user recommendations for 1M+ documents.
- Won the Best Computer Science Capstone Project Award at CSU.
  *Tools Used:* Python, CNTK, NodeJS, MongoDB, Angular 2 | *Project URL: https://github.com/sharesci/sharesci*

**Beam: An Autonomous Service Robot**, *CSU*, mentored by Dr. Pooyan Fazli. Aug 2016 – Aug 2017

- Lead a team to convert Beam+ robot (SuitableTech) into an autonomous ROS compatible research platform.
- Developed autonomous charging system for Beam+ using AR markers.
- Published this work as a first-author conference paper at 2017 AAAI symposium, Virginia, USA.
  *Tools Used:* ROS, Python, C, Linux | *Project URL: https://github.com/utkarshjp7/beam_navigation*

## AWARDS AND INVOLVEMENT

- Zillow Hack Week Judges Award, 2019
- San Francisco Food Bank Volunteer, 2019
- CSU Best EECS Capstone Project Award, 2018
- CSU President's List (2 semesters)
- CSU Dean's List (5 semesters)
- Top 10 in NE ACM programming competition, 2016

## PUBLICATIONS


[1] **Utkarsh Patel**, Emre Hatay, Mike D'Arcy, Ghazal Zand, and Pooyan Fazli. "Beam: A Collaborative Autonomous Mobile Service Robot". In: *Proceedings of the AAAI Fall Symposium on Artificial Intelligence for Human-Robot Interaction, AI-HRI 2017*. Arlington, Virginia, USA, 2017.