

# DWEEP TRIVEDI

[Email](#) | [Website](#) | [GitHub](#)

## EDUCATION

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### **University of Southern California (USC)**

Master of Science in Computer Science(with honors) | **GPA:** 3.95/4.0

Los Angeles, CA

August 2017 - May 2019

### **Dhirubhai Ambani Institute of Information and Communication Technology**

Bachelor of Technology in Information and Communication Technology | **GPA:** 9.15/10

Gandhinagar, India

July 2011 - May 2015

## PUBLICATIONS

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- [1] **Dweep Trivedi\***, Jesse Zhang\*, Shao-Hua Sun\*, and Joseph J. Lim. "Learning to Synthesize Programs as Interpretable and Generalizable Policies", Advances in Neural Information Processing Systems, 2021
- [2] Vinuta Hegde\*, **Dweep Trivedi\***, Abdullah Alfarrarjeh, Aditi Deepak, Seon Ho Kim, Cyrus Shahabi. "Yet another deep learning approach for road damage detection using ensemble learning", IEEE International Conference on Big Data (Big Data), 2020
- [3] Nitin Kamra, Hao Zhu, **Dweep Trivedi**, Ming Zhang, Yan Liu. "Multi-agent trajectory prediction with fuzzy query attention", Neural Information Processing Systems (NeurIPS), 2020
- [4] Abdullah Alfarrarjeh\*, **Dweep Trivedi\***, Seon Ho Kim, Hyunjun Park, Chao Huang, Cyrus Shahabi. "Recognizing material of a covered object: A case study with graffiti", IEEE International Conference on Image Processing (ICIP), 2019
- [5] Abdullah Alfarrarjeh\*, **Dweep Trivedi\***, Seon Ho Kim, Cyrus Shahabi. "A deep learning approach for road damage detection from smartphone images", IEEE International Conference on Big Data (Big Data), 2018

## WORK EXPERIENCE

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### **NAVER CLOVA AI Research, Seongnam, Korea**

July 2021 – Current

Research Intern

- Research in robot learning and human-robot interaction.

### **Cognitive Learning for Vision and Robotics (CLVR) Lab, USC**

July 2019 – Current

Visiting Researcher (*Advisor:* Prof. Joseph Lim)

- Conduct research on synthesizing programs as policy instead of neural network policy for Interpretable Reinforcement Learning
- Explored Imitation Learning and structured representations for learning from human demonstration videos

### **Machine Learning for the Real World (Melady) Lab, USC**

October 2018 – May 2019

Student Researcher (*Advisor:* Prof. Yan Liu)

- Contribute to research on predicting multi-agent trajectories and inferring relation between agents
- Exploring effects of augmenting RL agent with object properties and their interactions learnt using neural expectation maximization

### **Integrated Media Systems Center, USC**

February 2018 – May 2019

Student Researcher (*Advisor:* Dr. Seon Ho Kim)

- Conducted research on detection of 18 surface types on which graffiti is drawn using edge detection, scaling, segmentation techniques and deep learning frameworks.
- Detection of cleanliness of streets and 4 specific objects in need of removal from video stream data. Designed semi-supervised deep learning architecture that improves performance of the image classifier using large unlabeled dataset

### **Juniper Networks, Bangalore, India**

January 2015 - July 2017

Software Engineer

- Modified routing protocols and routing infrastructure modules for migration from JUNOS OS to nextGen distributed OS
- Redesigned and implemented OS infrastructure modules related to scheduler (kernel event notification

- mechanism), multithreading and I/O operations for nextGen distributed OS
- Mentored interns to get onboard with company's technology stack and ATF testing

## PROJECTS

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### **Relational Object-Oriented Reinforcement Learner**

*February 2019 - April 2019*

- Developed an object-oriented RL agent (ROORL) based on relational neural expectation maximization and Q-learning to explore effects of learning directly from object properties and their interactions

### **Data Driven Business Decisions for New Restaurants**

*September 2018 - November 2018*

- Created supervised learning models to predict cuisines and price levels that would yield highest Yelp ratings for a new restaurant based on location in Los Angeles, using data on 9,100 restaurants crawled from Yelp and Google UI
- Created qualitative analysis models to analyze nearby restaurants' food quality, service, ambiance from reviews using LSTM network, topic modeling techniques and NLTK, VADER Sentiment Analyzer tools

### **AI Meets Beauty (Team: ML Artists)**

*April 2018 - June 2018*

- Designed and programmed end-to-end pipeline to integrate OCR, text classifier, image vector generator and image classifier modules to search a beauty product in 500k product image dataset
- Classified images using custom classes to reduce search space by fine-tuning GoogleNet and VGG19 models in Caffe

## HONOURS AND AWARDS

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- "USC Viterbi Computer Science Merit Award" for academic achievements
- Two "Department Spotlight Award-In My Group" recognitions for outstanding performance in routing infrastructure team at Juniper Networks