

Github:  
hockeybro12

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nikhillmehta

Looking for:  
Internships Summer 2019

## SKILLS

**Programming:**  
Python, Java, C, Julia

**Machine Learning:**  
Deep Learning,  
Tensorflow, NLP, Vision,  
Numpy, Pandas, Sci-Kit  
Learn, Jupyter, Keras  
Data Analysis, Feature  
Engineering

**Other:**  
SQL, Cassandra, Linux,  
AWS, Git, Hadoop

## TEACHING

CS 252 Systems  
Programming Graduate TA:  
Fall 2018

## PROJECTS

**Machine Learning**  
Deep MEMM model for  
Named Entity Recognition  
implemented in Pytorch that  
uses Viterbi for inference.

Yelp Dataset Analysis using  
Custom Implementation of  
Naïve Bayes, KNN, and  
Decision Trees

**iPhone Apps, Games**  
Self-developed app that  
reached rank #9 in the Paid  
USA Reference Category and  
Top 900 Overall in the Paid  
USA App Store

# NIKHIL MEHTA

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## EXPERIENCE

### Researcher at Purdue

August 2017 - Present

- Working with Professor Dan Goldwasser to research ways to train an artificial agent to comprehend natural language instructions and use it to execute robotics / visual question answering tasks. The research paper describing this work is under submission.
- Solving complex problems in the space of Natural Language Understanding using LSTM's, word embeddings, data analysis, Tensorflow, and Numpy.

### Loom.ai

San Francisco, CA

*Deep Learning Intern*

May - Aug 2018

Loom.ai builds cutting-edge technology for creating personalized 3D digital avatars from a single photograph. The product, AR Emoji, is now available on every Samsung S9 and Note9.

- Used Computer Vision and Deep Learning techniques (CNN) to predict various attributes (age, gender, ethnicity, hair style, etc.) about a person from a single image.
  - Collected data for and predicted attributes using linear models off of CNN (Face Recognition trained) features. Improved attribute classification accuracy by 18%.
  - Improved age classification Mean Absolute Error from 5.32 to 3.88 years (27% better).
  - Created an approach to fine-tune an attributes model to easily classify new attributes.
- Developed a system to visualize and understand any CNN using Network Dissection.

### UnifyID

San Francisco, CA

*Machine Learning Engineer Intern*

May - Aug 2017

*Software Engineer Intern*

May - Aug 2016

UnifyID uses sensor data to implicitly authenticate users, effectively eliminating the password.

- Machine Learning + Data Science:**
  - End-to-end implemented a system to identify users based on how they pick up their phone using signal preprocessing that is now an authentication factor.
  - Evaluated techniques such as Power Spectral Density analysis, Support Vector Machines, and Clustering to authenticate based on human resonance frequency.
  - Worked to improve the state of the art gait authentication system using Deep Nets.
- TechCrunch Disrupt Beta:** contributed to the backend server, iOS app, and Chrome extension via REST APIs, RSA Security, and Database Interactions.

## EDUCATION

### Purdue University

West Lafayette, Indiana

*M.S. Computer Science*

Aug 2018 - Dec 2019

**Focus:** Machine Learning

**Relevant Coursework:** Machine Learning for Natural Language Processing, Matrix Computations, Operating Systems, Statistical Machine Learning

*B.S. Computer Science*

Aug 2014 - Jun 2018

**Focus:** Machine Intelligence and Security

**Relevant Coursework:** Compilers, Algorithms, Probability, Statistical Theory, Networks, Artificial Intelligence, Foundations of Real Analysis, Computer Security, Cryptography

## PEER REVIEWED PUBLICATIONS

**ICML 2017 Tiny-ML Workshop** Memorization in Binarized Neural Networks.

Evaluated the generalization ability of Binary Neural Networks. Authored and presented.