# Rahul Malavalli

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## SELECTED EXPERIENCE

### INSTABASE | Software Engineering Intern
January 2020 - March 2020 | San Francisco, CA
- Completed 3 projects that support client workflows and critical applications.
- Backend feature development in Python, currently in production.

### FACEBOOK | Software Engineering Intern
June 2018 - September 2018 | Menlo Park, CA
- Storage/databases team for Messenger Infrastructure.
- Developed internal tool for recovery of content in disaster scenarios.

### BUILDUCLA COLLECTIONS LAB | Student Researcher
January 2018 - June 2018 | Los Angeles, CA
- Trained models and developed pipeline to detect annotations/marginalia of interest to researchers in digital copies of old books and manuscripts.
- Implemented Convolutional Neural Networks (CNNs) in PyTorch to perform appropriate object recognition and detection computer vision tasks.
- https://github.com/collectionslab/annotations-computervision

### GOOGLE | Software Engineering Intern
June 2017 - September 2017 | Mountain View, CA
- Analyzed Android Instant App memory footprints and visibility, among other factors, to determine causes of instant app crashes in low memory situations.
- Implemented instant app process management system in Java to gracefully manage Android Instant App life cycles and ensure smooth user experience.

### SENSING AT RISK POPULATIONS LAB, UCLA HEALTH | Undergraduate Researcher
April 2016 - September 2016 | Los Angeles, CA
- Allows physicians to remotely monitor geriatric patient health and activity.
- Trained models (scikit-learn in Python) to predict patient activity from smart watch data. Improved precision/recall on high-error activities nearly 2.5 fold.
- http://risksciences.ucla.edu/smart-health/

## SELECTED PROJECTS

### ECE239AS FINAL PROJECT | Analysis of VAEs for Reconstructive and Generative Tasks
March 2019
- Development (in PyTorch) and comparison of Autoencoders (AEs) and Variational Autoencoders (VAEs) as generative models on the MNIST and Eigenfaces datasets.

### RESEARCH PAPER | Indoor Positioning through Machine Learning on WiFi Fingerprints
February 2017 – September 2017
- Trained machine learning models on ambient WiFi RSSI values to achieve F-measures at and above 0.9 in university and home environments.
- Integrated model into Android application for live training and prediction.
- Paper written with two partners accepted into international conference (IPIN 2017) in WIP division; presented poster at the conference.
- http://www.ipin2017.org/ipinpapers/224/224.pdf
- https://github.com/arjun372/Indoor-WiFi-Localizer

## SKILLS

### LANGUAGES
Python
Java
C++
C
HTML/JavaScript

### PROGRAMMING
Object Oriented Programming
Operating System Development
Machine Learning
Deep Learning
Computer Vision (PyTorch)

## LINKS
https://www.linkedin.com/in/rahul-m
https://github.com/rahulm

## EDUCATION

### UNIVERSITY OF CALIFORNIA, LOS ANGELES (UCLA)

#### M.S., Computer Science
Expected Graduation by Dec 2020
Selected Courses:
- Pattern Recognition and ML
- Neural Networks and Deep Learning
- Quantum Programming
- Natural Language Processing
- Reinforcement Learning

#### B.S., Computer Science and Engineering
Graduated June 2018
Selected Courses:
- Data Structures
- Intro to Algorithms and Complexity
- Operating Systems Principles
- Fundamentals of AI
- Intro to Computer Graphics (in WebGL)
- Entrepreneurship for Engineers
- Introduction to Machine Learning

## ADDITIONAL PROJECTS

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|---|---|
| CS152B - FPGA Depth Perception | Oct. - Dec. 2017 |
| EE3 Project - Arduino Knock Unlock | Apr. - June 2016 |
| LAHacks 2016 - PorFavor | Apr. 2016 |
| Hacketech 2016 - PoliSense | Feb. 2016 |
| Android App - UCLA Dining | Summer 2015 |
| Android Game - Amaze | Summer 2014 |