Rahul Malavalli

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SELECTED EXPERIENCE

CENTER FOR VISION, COGNITION, LEARNING, AND AUTONOMY (VCLA) AT UCLA | Graduate Student Researcher

October 2018 - December 2018 | Los Angeles, CA

- Energy-based weakly supervised classification in computer vision (PyTorch).

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
Android and Game Development
Operating System Development
Machine Learning
Deep Learning
Computer Vision (PyTorch)

LINKS

https://www.linkedin.com/in/rahul-m
https://github.com/rahulm11

EDUCATION

UNIVERSITY OF CALIFORNIA, LOS ANGELES (UCLA)

M.S., Computer Science

Expected Graduation by June 2020

Selected Courses:

- Pattern Recognition and Machine Learning
- Neural Networks and Deep Learning
- Quantum Programming

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

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