Hitesh Ulhas Vaidya

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Education

Master of Science in Computer Science — December 2020
Rochester Institute of Technology, Rochester, NY — *3.3/4.0*

Bachelor of Engineering in Computer Engineering — May 2017
University of Mumbai, Mumbai, India — *7.37/10.0*

Skills

Programming:	Python , Java, C, C++, HTML, CSS
Tools:	PyTorch, Tensorflow, Pandas, Scikit learn, NLTK, Jupyter notebook, Anaconda, Google Colab, Pillow (PIL), MySQL, Flask
Relevant Courses:	Statistical Machine Learning, Foundations of Intelligent Systems, Foundations of Computer Vision, Topics in Intelligent Systems, Independent Study in lifelong machine learning
Operating Systems:	macOS, Linux, Windows

Experience

Summer Research Assistant — May 2019 – August 2019
kLab - Rochester Institute of Technology — *Rochester, NY*

- Compiled a video dataset containing 100 classes and 125 videos per class for image classification in streaming learning
- Curated video datasets like Imagenet VID, Google OpenImages, GOT10k etc. using Python scripts to form a new dataset
- Implemented experiments using Resnet18 CNN and obtained accuracies up to 83%
- Submitted a research paper based on this work at ICRA 2020

Research Assistant — September 2018 – December 2018
Rochester Institute of Technology — *Rochester, NY*

- Performed analysis of daily latent activity patterns of individuals by analyzing their schedule and travel patterns
- Implemented LDA algorithm and identified different parameters responsible for travel chains of individuals
- Wrote Python scripts to extract knowledge like travel distance, number of stops, length of journey etc.

Research Intern — August 2017 – May 2018
Indian Institute of Technology, Bombay — *Mumbai, India*

- Developed a corpus for English to Hindi Neural Machine translation. The size of this corpus was **1.7 million**
- Performed experiments using OpenNMT library's LSTM module and achieved 85% accuracy
- Wrote graph coloration script in Python to visualize social media profiles in gephi software

Projects

Empirical Study on benchmarks for lifelong learning based classification — September 2019 – Current

- Studying and implementing lifelong learning based models for image classification
- Calculating catastrophic forgetting on MNIST and Caltech-256 using backward and forward transfer scores

Visual Question Answering on images — November 2019 – Current

- Building a system that given an image, answers questions asked about it, example, Which fruit is there in the image?
- Using MS COCO dataset to train a combination of Convolutional Neural Network and Recurrent Neural Network

Hierarchical Expert System for security evaluation of Android Devices — May 2019 – June 2019

- Built a fuzzy logic based expert system that evaluates security score of an Android device based on 12 parameters
- Used Jess Rule engine to encode fuzzy logic rules and Java Swing class to build desktop app
- Converted the desktop app to an android app that uses simple feed forward neural network for score evaluation

Sentiment Analysis and Recommender System — May 2018 – August 2018

- Developed a system that recommends new cell phones based on reviews of mobiles on Amazon
- Implemented both discriminative and machine learning approach. Used libraries like nltk, scikit-learn for development