NIKITA RAUT

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EDUCATION

Northwestern University — Evanston, Illinois
MS in Computer Science (4.0 / 4.0) — Sept 2019 - Present

K.J.Somaiya College of Engineering — Mumbai, India
Bachelor of technology in Computer Engineering (8.85 /10.0) — Aug 2015 - May 2019

Coursework: AI, Machine Learning, Advanced Deep Learning, Deep Learning Foundations, Statistical Pattern Recognition, Statistical Language Modeling, Data Science Seminar

EXPERIENCE

KJ Somaiya College of Engineering — Mumbai, India
Machine Learning Intern — Dec 2017 - Jan 2018
Implemented a Real Time Face Recognition System using k-shot Learning. Performed transfer learning, using a resnet model pretrained on triplet loss function.

Computer Help — Mumbai, India
Machine Learning Intern — May 2017 - July 2017
Developed an Damage Detection System using image processing, which aimed at an early detection of cracks in inaccessible places. Achieved fast and reliable detection of cracks to concrete surfaces, replacing the slower subjective traditional human inspection procedures.

SKILLS

Languages	Python, Java, C, C++
Libraries	PyTorch, Tensorflow, Keras, Tflearn, Numpy, OpenCV
Databases	MySQL, Oracle11g, Postgresql , Firebase
Web Development	PHP, JavaScript, Bootstrap, AJAX, Express JS, Angular
Tools	Tableau, Spark, Databricks, D3.js, Matlab, Git

PROJECTS

Image Inpainting — Jan 2020 - March 2020
Performed restorative conservation of missing pixels of an image by passing its k nearest pixels through an LSTM network and applying position blending to preserve intensities.

Text2SQL — Feb 2020 - March 2020
Implemented a syntax tree based encoder-decoder model to address the complex and cross-domain text-to-SQL generation task. Exploited the structural format of SQL language using recursive decoders to improve the generalizability on an unseen schema.

COVID-19 spread prediction using Graph Convolution Neural Networks — March 2020
Analyzing the spread of COVID-19 in the provinces of the United States using GraphSage and Message Passing. The Dataset used was John Hopkins COVID-19 Data. Additional factors used were the population density, general population count and the elderly population count from the census data, and the flight frequencies between two cities using the USA Airlines data.

Data Analytics on Chicago Police Dataset — Sept - Dec 2019
Performed relational analytics, visualization, graph analytics, and machine learning on Chicago Police Dataset to learn about the general behavior of the officers charged with misconduct and to identify the trends in data.

Smart Goods Transportation System | Final Year Project — July 2018 - May 2019
Designed and Developed a full-stack software application using IoT technology and firebase cloud service to provide truck drivers, customers, and vehicle owners with reliable information and communication support regarding the journey schedule of patrons. Performed Time Series Analysis using the ARIMA model to predict the shortest path between two endpoints.

PUBLICATIONS

Face Recognition using One-shot Learning
Nikhil Thakurdesai, Nikita Raut and Anupam Tripathi. Face Recognition using One-shot Learning. International Journal of Computer Applications 182(23):35-39, October 2018.