DEEP K. LOKHANDE

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EDUCATION

Rutgers University, New Brunswick, NJ *08/2018 - (Expected) 07/2021*
Master of Science, Department of Electrical and Computer Engineering. **GPA : 3.72**
Relevant Coursework: DSA, Artificial Intelligence, Machine Learning, Quantum Computing, Optimization.

University of Pune, Pune, India *07/2013 - 06/2017*
Bachelor of Engineering, Department of Electronics and Telecommunications. **GPA : 3.74**

PROJECTS

Data Prediction & Interpolation Machine Learning | *Rutgers University*

- Analysed raw data from ManyLab's project, to predict missing data and extract significant features.
- Implemented one-hot encoding & normalization on raw data and programmed Bayesian Network tree using Chow-Liu algorithm for feature dependency interference and data interpolation. Predicted satisfactorily(near 67%) of missing data while eliminating irrelevant features present in data.

Data Analysis and Price Prediction of Airbnb Listings Machine Learning | *Rutgers University*

- Exploratory data analysis on Airbnb listings in NYC, to detect hidden trends and patterns.
- Applied Linear Regression, Random Forest & Xtreme Gradient Boosting, with cross validation and feature engineering for parameter tuning, resulted in improved Price prediction accuracy with minimized RMSE.

Colorizer for Black & White Image Artificial Intelligence | *Rutgers University*

- Modeled a linear regression based learning model in python for converting black and white images to color using training on color and black/white duals of images without semantic classification of objects.
- Used stochastic gradient descent optimization to minimize MSE objective function & studied factors beneficial to model performance in learning conditions limited to non-contextual & localized features.

Quantum Error Correcting Codes Error Control Coding | *Rutgers University,*

- Studied techniques used in quantum computers and circuits for error correction and fault tolerance.
- Implemented the bit flip and phase flip quantum error correcting code, using IBM's Qiskit services on IBM's 5 qubit quantum computer.

TECHNICAL SKILLS

Programming and Web Development Python, C++, R, Java, HTML, CSS, JS, Flask, MySQL.
Software & Services Handled AWS, GCP, Git, Qiskit, Cirq, MATLAB, Docker.

PROFESSIONAL EXPERIENCE

Part-Time Lecturer CS 142 : DATA 101 | *Rutgers University* | *Spring 2021*
Teaching Assistant EE 366 : Digital Electronics | *Rutgers University* | *Spring 2020*
Research Assistant Prof. Emina Soljanin's Lab | *Rutgers University* | *05/2019 - 08/2019*

- Researched on Quantum Approximate Optimization Algorithm(QAOA) for solving graph based and semi-definite programming problems using NISQ computers.
- Implemented the QAOA algorithm for finding the Weighted Max-Cut of a graph using IBM Qiskit.

Research Assistant University of Pune, India | *09/2017 - 05/2018*

- Researched on unexplored human bio-metrics and security features which can be used in future security system's with higher security, low cost and system requirements.
- Modelled bi-layered security system based on palm print and vein features using low cost DSP's.

ACHIEVEMENTS & LEADERSHIP EXPERIENCE

IBM Quantum Challenge Fall 2020 - Advanced Badge IBM Quantum | *Fall 2020*
Departmental Head for Technical Activities University of Pune, India | *A.Y. 2015 - 2016*

- Administered various events, seminars and workshop on topics of electronics and programming.