

# Pratyush Kumar

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## EDUCATION

### IIT ROORKEE

B.TECH IN INDUSTRIAL ENG.  
2013 - 2017 | Roorkee, India

### UDACITY

DATA ANALYST NANODEGREE  
June 2016 - Sep 2016

## SKILLS

### DATA ANALYSIS

Pandas • NumPy

### DATA WRANGLING

Python

### DATA VISUALIZATION

R • D3 • Matplotlib

### MACHINE LEARNING

Scikit-learn • TensorFlow

### BIG DATA

Spark • Map Reduce

### PROGRAMMING

Java • C++ • Scala

### DATABASE

SQL

### VERSION CONTROL

Git

### SOFTWARE PACKAGES

MATLAB • MySQL • PyCharm

• Eclipse • MS Office

### OPERATING SYSTEM

Linux • MacOS • Windows

## COURSEWORK

Machine Learning (Coursera)  
Advanced Statistics  
Linear Algebra  
Algorithm and Data Structure  
Graph Theory  
Database Management System  
Engineering Optimization  
Operation Research

## REFERENCES

• P.M. Pathak  
Associate Prof., IIT Roorkee  
pushpfme@iitr.ac.in  
• Kaushik Pal  
Associate Prof., IIT Roorkee  
palkfme@iitr.ac.in

## EXPERIENCE

### IITIANSCLUB | EXECUTIVE MEMBER

March 2015 - Present

- Serving as an Executive Member of IITiansClub (a study portal to help and guide JEE aspirants to prepare effectively).
- Lead the technical team to develop the backend of the website.
- Created Practice Lounge for the online quiz and tests. Developed a discussion forum for the online doubts and counseling

### DUKE IT | SOFTWARE DEVELOPER INTERN

May 2016 - July 2016 | Bengaluru, India

- Used AWS cloud computing platform to analyze different datasets. Uploaded the data on Amazon S3 bucket, used Amazon Elastic Map Reduce built in features to load the data onto the cluster.
- Queried the database as per company requirements.
- Explored the dataset using EDA and visualized it using R and fulfilled company demands for required data and insights.

## PROJECTS

### HAPTICS ROBOT FOR MOTOR REHABILITATION

July 2016 - Present | IIT Roorkee

- The project involves design and development of Haptics planner robot hand.
- Virtual environment for providing force feedback mechanism to the haptic hand is being developed.
- Machine learning algorithms like the Neural Network has been implemented to train the Haptic hand.
- Finally, the hand is used for motor rehabilitation purposes.

### IDENTIFYING FRAUD FROM ENRON EMAILS AND FINANCIAL DATA | July 2016 - August 2016 | Udacity | GitHub Link

- Aim was to explore the Enron dataset, use data wrangling and visualization techniques to clean and visualize the data, find the correlation between various features, identify extreme outliers and finally use appropriate machine learning algorithm to predict Person of Interest 'POI' i.e., employees who committed fraud.
- The accuracy of algorithms was calculated by F1 score; the logistic regression with PCA gave the best results.
- Achieved the highest accuracy among all the code submissions.

### OPENSTREETMAP DATA WRANGLING WITH SQL

May 2016 - June 2016 | Udacity | GitHub Link

- Implemented data munging techniques like assessing the quality of the data for validity, accuracy, completeness, consistency and uniformity.
- Used ElementTree to parse the OSM file which had lots of inconsistencies in the dataset viz., abbreviations, lowercase, misspelling etc.
- Created regex to clean and standardize the dataset. Queried the dataset to extract useful information viz., number of unique users, common amenities, popular places etc.
- Created an input data model so that new users follow it to reduce the number of inconsistencies.