Rushabh Patel

Machine Learning & Data Science Professional

- Highly analytical and process-oriented data science professional with 3+ years of experience and in-depth knowledge of database types, statistical research methodologies, and big data capture, curation, manipulation and visualization.
- Experience in conducting statistical analyses and predictive analyses on large healthcare data sets. Sound understanding of healthcare processes including Medicare, Medicaid EMR, EHR, Healthcare Industry standards and practices including ICD, CPT and DRG codes and HIPAA Compliance for Healthcare system.
- Experience in acquiring, merging, cleaning, analyzing and mining structured, semi-structured and unstructured data sets for analysis.

Personal Info

Address
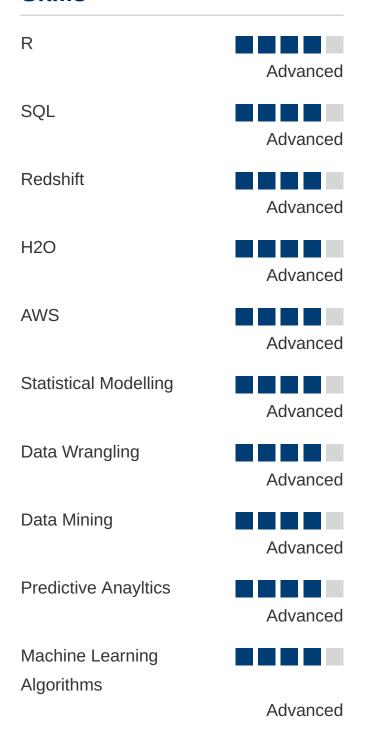734 Grand Central Dr,
Hamilton NJ 08619

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E-mail
rushabh.patel5@gmail.com

Date of birth
31 May 1992

LinkedIn
linkedin.com/in/rushabhpatel5/

Skills

R
Advanced

SQL
Advanced

Redshift
Advanced

H2O
Advanced

AWS
Advanced

Statistical Modelling
Advanced

Data Wrangling
Advanced

Data Mining
Advanced

Predictive Anayltics
Advanced

Machine Learning Algorithms
Advanced

Experience

Feb 2019 - present

Data Scientist

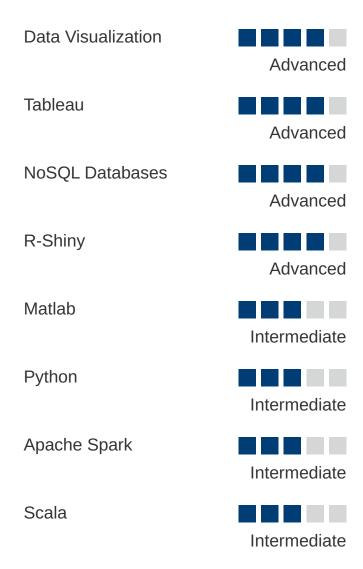*Visiting Nurse Service of New York, Manhattan, NY*

- Develop, build, test and deploy machine learning algorithms to support development of business processes for healthcare organization and subsidiary health plan provider, to improve business outcomes and quality of care.
- Create and maintain framework for deploying machine.
- Utilize resulting applications to implement, track and monitor predictive models used to guide business decisions.
- Engineer computational solutions and develop algorithms and applications to meet the predictive needs of clinical and business units across the Visiting Nurse Service of New York.
- Identify clusters of sub-populations of patients who may benefit from targeted care-management strategies: improves positive predicted value for patient outcomes based on sub-modeling for each cluster.
- Ensure accuracy of deployed algorithms is monitored on ongoing basis; alert management when algorithm performance declines, identify causes.
- Ensure data quality throughout all stages of acquisition and processing, including sourcing, collection, ground truth generation, normalization & transformation.

Jun 2017 - Jan 2019

Data Scientist

Jvion (R&D Department), Johns Creek, GA

- Design statistical models/programs using R to successfully test hypotheses and answer targeted questions in healthcare outcomes research.
- Design algorithms for the recommended actions/interventions that will best prevent adverse events and deterioration.
- Cluster analysis for identifying sub-populations of complex patients who may benefit from targeted care management strategies and improvising positive predicted value for patient outcome by sub-modelling on each cluster.
- Perform analysis on the targets including hospital readmission among Acute Myocardial Infarction (AMI) patients, IP visits, ER visits, MRSA among diabetes patients, congestive heart failure, Clostridium difficile (C. diff.), pressure injury, sepsis and fall-injury.
- Writing complex SQL queries for data investigation and mapping to extract data for analysis.
- Build algorithms to reduce predictive analytics in driving population-level insights and the expected ROI from predictive population health analytic solutions.
- Report and visualize results of statistical analyses, in the form of graphs, charts, and tables using Tableau.

Data Visualization
Advanced

Tableau
Advanced

NoSQL Databases
Advanced

R-Shiny
Advanced

Matlab
Intermediate

Python
Intermediate

Apache Spark
Intermediate

Scala
Intermediate

Jan 2017 - May 2017

Research Assistant

University of Illinois at Springfield (Collaboration with SIU School of Medicine)

- Worked on pediatric cancer patient data from SIUSOM and using statistical modelling techniques we identified significant patterns in the diagnosis and treatment.
- Analyzed data to find specific correlations between demographic information and disease unique to the pediatric patients that are served by SIUSOM.
- Concentrated on linkages between socioeconomic status, racial/ethnic demographics, zip code, and other demographic factors and specific pediatric diseases.
- Analyzed these linkages in a manner that allows clinician researchers to reexamine our approaches andtreatment plans on the patients that we serve.

May 2016 - Aug 2016

Research Student Worker (MIS Department),

University of Illinois at Springfield

- Worked on a Supply Chain Management Project.
- Collected and reviewed data from different research studies.
- Wrote R code to perform statistical analysis and meta-analysis on data to get key insights.
- Involved in defining the source to target data mappings, business rules, and data definitions.

Jan 2016 - May 2016

Research Assistant

University of Illinois at Springfield

- Worked on a project named A Novel Computer Aided Diagnosis(CAD) System for Breast Cancer Based on Convolution Neural Network(CNN).
- Presented using an innovative tumor classification method based on convolution neural network on breast mammogram images to improve the diagnosis accuracy.
- A novel training and testing scheme is also proposed to train CNN in an image data-set with limited case number.
- A novel reinforcement sample learning scheme is proposed to train the CNN with less iteration epochs and less training time.

Jan 2014 - May 2014

Intern

Allstate Solutions Pvt. Ltd.

- Worked on a project named Document Processing System, which holds data for customers involved in a claim and where the goal was to predict the exact car insurance options purchased by individual customers.
- Involved in Feature Transformation and Engineering process where I used some of those features as-is, and engineered additional features using transformations or combinations of features.

Jul 2015 - Aug 2016

Co-Founder

PayTooth Software Solutions Pvt. Ltd.

- Proposed a new idea where money can be transferred easily in absence or low range of cellular network.
- Designed & Developed application for PayTooth.
- Analyzed survey data on mobile payment gateways data-set in India to ensure the product launching strategy and Market Intelligence.

Education

Jan 2020	**Pace University** • *PhD Computer Science (AI & Machine Learning)* • *Pursuing while working full-time with VNSNY*
Jan 2016 - May 2017	**University of Illinois at Springfield** • *Master of Science (MS) in Computer Science GPA - (4.0/4.0)* • *Honors In Computer Science (For best Academics and Research).*
Jul 2011 - May 2015	**Symbiosis International University** • *Bachelor of Technology (B.Tech) in Computer Science*

Publications

Feb 2019	Pediatric Population Health Analysis of Southern and Central Illinois Region: A Cross Sectional Retrospective Study Using Association Rule Mining and Multiple Logistic Regression
Apr 2017	A Novel Reinforcement Sample Learning Strategy for Convolution Neural Network in Computer Aided Diagnosis System for Breast Cancer, SIIM conference 2017
Oct 2015	Introducing a Hi-Tech - Cloud based Public Transport System, International Journal of Computational Intelligence Research (IJCIR)
Jun 2015	PayTooth - A Cashless Mobile Payment System based on Bluetooth, International Journal of Computer Applications (IJCA)
Apr 2015	Comparative Review of Existing Mobile Payment Systems, International Journal of Applied Engineering Research (IJAER)
Jan 2015	Envision of I-RS (I-Railway System)-based on Cloud Computing, International Journal of Science, Engineering and Technology Research (IJSETR)
Jan 2014	Evolution, Envisage of Mobile Network, International Journal of Scientific Engineering, and Technology Research (IJSETR)