RUSHABH PATEL

MACHINE LEARNING & DATA SCIENCE PROFESSIONAL

SUMMARY

Highly analytical and process-oriented data science professional with 5+ 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

CONTACT

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EDUCATION

**PhD Computer Science
(AI & Machine Learning)**
Temple University
Aug 2020 – Present

- *Pursuing while working full-time with Children's Hospital of Philadelphia.*

M.S. in Computer Science
University of Illinois, Springfield
Jan 2016 – May 2017

- *GPA - (4.0/4.0)*
- *Honors In Computer Science (For best Academics and Research)*

B.Tech in Computer Science
Symbiosis International University
Jul 2011 – May 2015

PROFESSIONAL EXPERIENCE

Applied Data Scientist II

Children's Hospital of Philadelphia (DBHi)

Present
06/2020

- Working in a Department of Biomedical & Health Informatics.
- Applying natural language processing (NLP/NER) methods to clinical text to extract structured information.
- Applying statistical models to assist researchers in analyzing missing, erroneous or incomplete patient data.
- Implementing statistical and machine learning models, large-scale, cloud-based data processing pipelines and off the shelf solutions for test and evaluation; interpret data to assess algorithm performance.
- Developing novel ways to apply published machine learning models to imperfect clinical data including development of training datasets.
- Developing high-quality, secure code implentation models and algorithms as application programming interfaces or other service-oriented software implementations.
- Managing and scaling applications using container technology and cloud hosted managed services.

  Programming languages\Techniques\tools: Python, Apache Spark, BigQuery, Kubernetes, Argo, Dataflow, Apache Beam, Terraform, Docker, R.

Data Scientist

06/2020
02/2019

Visiting Nurse Service of New York, Manhattan, NY

- Developed, built, tested and deployed 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.
- Created and maintained framework for deploying machine. Utilized resulting applications to implement, track and monitor predictive models used to guide business decisions.
- Orchestrated computational solutions and developed algorithms and applications to meet the predictive needs of clinical and business units across the Visiting Nurse Service of New York.

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)

PROFESSIONAL EXPERIENCE (CONTINUED)

- Identified clusters of sub-populations of patients who may benefit from targeted care management strategies: improved positive predicted value for patient outcomes based on sub-modeling for each cluster.
- Ensured accuracy of deployed algorithms is monitored on ongoing basis; notified management when algorithm performance declines, identify causes.
  Ensured data quality throughout all stages of acquisition and processing, including sourcing, collection, ground truth generation, normalization & transformation.

Programming Languages\Techniques\Tools: R. SQL, Python, Apache Spark, Tableau, H2O, Random Forest, XGBoost, Light GBM, Regression, Clustering, KNN, GBM, PCA, SVD

01/2019 06/2017	**Data Scientist** Jvion (R&D Department), Johns Creek, GA

- Designed statistical models/programs using R to successfully test hypotheses and answer targeted questions in healthcare outcomes research.
- Designed algorithms for the recommended actions/interventions that will best prevent adverse events and deterioration.
- Performed 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.
- Wrote complex SQL queries for data investigation and mapping to extract data for analysis.
- Built algorithms to reduce predictive analytics in driving population-level insights and the expected ROI from predictive population health analytic solutions.
- Reported and visualized results of statistical analyses, in the form of graphs, charts, and tables using Tableau.

Programming Languages\Techniques\Tools: R, SQL, Python, Apache Spark, Tableau, H2O, Random Forest, XGBoost, HDBSCAN Clustering, KNN, GBM, PCA, SVD.

08/2016 07/2015	**Co-Founder** PayTooth Software Solutions Pvt. Ltd.

- Proposed & implemented 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 dataset in India to ensure the product launching strategy and Market Intelligence.

INTERESTS

Reading   Technology   Data Science   Mentoring