# **AMBIKA RANA**

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### **EDUCATION**

# Hartford, CT University of Connecticut Aug 2016 – Dec 2017(Expected)

- M.S. in Business Analytics and Project Management. GPA: 4.0/4.0
- Coursework: Predictive Modeling, Data Analytics with R, Data Mining and Business Intelligence, Data Science with Python, Business Decision Modeling, Project Risk and Cost Management

## Hamirpur, India Natio

**National Institute of Technology** 

Aug 2008 - May 2012

B.Tech in Electronics and Communication Engineering. GPA: 8.3/10

### **SKILLS AND TECHNOLOGIES**

- Techniques Exploratory Data Analysis, Hypothesis testing, Regression analysis, Random forest, Boosting, Clustering, Linear Optimization, Behavioral Segmentation
- Tools R, SQL, Python (Pandas, ScikitLearn), SAS, SAS JMP, Microsoft Excel, Tableau, UNIX
- Certifications SAS Base programmer, Data Science with Python (Data Camp)

## **HEALTHCARE DATASETS**

- Specialty Market Pharmacy (Referral, Dispense, Purchase, Inventory), Distributor (867, 852)
- IMS longitudinal Patient Data, IMS DDD, IMS Exponent, Symphony Claims (DX, RX)
- HCOS Affiliations, Territory alignment, Call Activity

### **EMPLOYMENT**

# **Promotion Optimization Intern**

Merck & Co. Inc.

Jun 2017 - Present

- Built a Python framework on longitudinal patient data to analyze variation in patient abandonment and adherence with change in copay
- Implemented panel regression on physician sales to study promotional effectiveness of various channels
- Performed hierarchical clustering using market landscape to select geographies for a promotional pilot
- · Studied impact of removing online Januvia vouchers on new patient starts and subsequently net revenue

# Associate Consultant ZS Associates Nov 2013 – Jul 2016

### **AstraZeneca**

- · Analyzed patient data to evaluate compliance, persistence and assist client access team with actionable insights
- Led development of a \$130k reporting solution for a portfolio of oncology drugs enabling dynamic creation of dashboards and real-time analysis of brand performance
- Designed KPIs to quantify the performance of specialty pharmacies for calculating their quarterly payouts
- · Created dashboards and presentations to report weekly trends in patient and sales data to the leadership

# MedImmune

- Automated the in-house BI tool using UNIX scripting and SQL procedures to analyze dispensing data from 80 pharmacies per week, thereby saving \$90k in operational cost
- Analyzed gaps in product distribution and data consistency between specialty pharmacy and distributor data
- Created weekly performance reports assisting sales force in profiling their top customers

## **Union Chimique Belge (UCB)**

Supported sales and activity operations for multiple brand teams including Cimzia, Neupro and Vimpat

# Software Engineer Verizon Data Services

Jun 2012 - Oct 2013

Automated billing process using ESP and CA7 tools to reduce the testing time of billing plan by 50%

### **ANALYTICS PROJECTS**

- **Airbnb booking destination prediction** Utilized feature engineering and boosted tree based hierarchical classification modeling to predict the booking destination of a customer with an accuracy of ~85%
- Travelers claim prediction challenge Built a prediction model for claim amount using tweedie distribution and generalized linear model with a resulting Gini Index of 21.12, an improvement of 5% above the baseline
- Analysis of patient readmission rates Analyzed the impact of HBA1C testing on the readmission rates of diabetic patients; obtained statistically significant results (p-value < 0.002) for patients with a primary diagnosis of diabetes and respiratory diseases
- Non-linear regression Predicted the out of state tuition fee using Generalized Additive model (GAM), to illustrate its advantages over decision tree based models in interpretability, automation and regularization

### **ADDITIONAL EXPERIENCE AND AWARDS**

- Merit based scholarship, University of Connecticut Awarded for academic excellence in the graduate program
- Impact Recognition, ZS Associates Awarded for outstanding performance as a Technology Associate
- Ensemble modeling challenge, Analytics Vidhya Ranked 4th out of 1,200 participants in an online challenge