

# Piyush Verma

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## EDUCATION

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University of Cincinnati, Carl H Lindner School of Business, Cincinnati, Ohio

August 2018

Master of Science in Business Analytics | GPA: 3.7/4

IIT Kharagpur, India

Master of Technology in Metallurgical Engineering | GPA: 8.1/10.0

May 2014

Bachelor of Technology in Metallurgical Engineering | GPA 7.6/10.0

May 2013

## SKILLS & CERTIFICATIONS

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**Machine Learning:** Linear and Logistic Regression, LDA, KNN, Cross-Validation, Lasso and Ridge Regression, Decision Trees, Random Forest, Bagging, Boosting, Support Vector Machine, PCA, K-means clustering, Hierarchical clustering, A/B Testing, Neural Networks, Sentiment Analysis, Recommender System

**Libraries:** ggplot2, caret, dplyr, tidyr, pandas, numpy, scikit-learn, plotly

**Software:** [R](#), SQL, Python, SAS, VBA, RShiny, Apache Spark, [Tableau](#), [GitHub](#), Arena, , MS Excel

**Certificate:** [Data Science Certificate](#) , a 10-course specialization by John Hopkins University on Coursera

## EXPERIENCE

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Quantum Analytics

July 2014 – April 2017

Analyst

**Role**      **Retail**

- Built a customer propensity model to predict whether a customer is going to redeem a reward coupon
- Led a team of MicroStrategy software developers and client's Business Intelligence team to deploy the Quantum Solution in-house (Sydney, Australia)
- Moved to Sydney Australia as a **Subject Matter Expert** (2016)
- Delivered Customer Churn analysis to understand impact of campaigns on customer shopping behavior
- Devised an excel based customer health dashboard with 150+ KPIs, reflecting the high-level business trend and showing how retail customers were earning reward points through different channels
- Programmed in Teradata SQL creating reproducible code pipelines calculating 150+ KPIs
- Performed customer segmentation using K-means Clustering, “Customer Value Model” and “Share Of Wallet” Model in Apache Spark

**Insurance**

- Applied lasso regression to deconstruct competitor's insurance pricing structure to evaluate client's competitiveness for different customer segments (age, claim history, address, driving experience)

**Results**      **Retail**

- Improved scanning of loyalty cards by 5% (~450,000 more weekly transactions)
- Reported a data discrepancy of weekly sales worth \$40 million missing from the client's database
- Client revamped \$500 million loyalty program and introduced a 0.5% base reward earn rate on every transaction

**Insurance**

- Automated quality assurance checks and modified the excel tool for other insurance products

## ACADEMIC PROJECTS

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- [Customer Segmentation for a retail supermarket](#): (Customer Value Model, K-medoids)  
Used Partition Around Medoids realization of K-medoids to perform clustering of the customers
- [Predicting text using N-Grams](#): (N-Grams, Text Mining, R Shiny, R)  
Built an interactive R Shiny web application where a user can enter a string of text and the application would predict the next word. The algorithm used here is Katz Back-Off which uses the conditional probability of a N-Gram
- [Classification of dysfunctional stores](#): (K-means clustering, Hypothesis Testing, HR Analytics)  
Built a predictive model for retail client identifying their potential dysfunctional store in future using employee data