

Tianwei Zhang
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Summary

Data scientist with 3-year experience of creating actionable insights in management consulting and software industry. Emerging people leader with a track record of apprenticing junior members and building team capabilities. Strong research background with a Master's Degree in Operations Research from Cornell University. Proficient in data science tools such as R, SQL, Shiny, HiveSQL, and Sparklyr

Experience

McKinsey & Company, Waltham, Massachusetts

Analytics Fellow

Nov 2015-present

Create business recommendations with advanced analytics. Develop web-based applications with R Shiny to streamline analyses and **reduce lead time** by 80%. Recruit and **apprentice** two junior analysts (McKinsey certified analytics interviewer)

Example 1: Product value differentiation with patient segmentation

- Created **value story** for a newly launched product by identifying outperforming patient segments
- Built zero-inflated negative binomial models to predict rate of a severe medical event
- Applied **propensity score matching** to ensure fair comparison between two patient populations
- Leveraged **project management tools** such as GitHub, Confluence, and Jira to collaborate in a team of 12 members

Example 2: Clinical trial optimization

- Leveraged machine learning to increase efficiency of the clinical trial process
- Reduced failure rate of trial sites by 6% with a **classification** model to predict site failure
- Reduced time to reach enrollment target by 20% by predicting the top performers
- Integrated and managed 5 data sources with more than 3 million data points in R, SQL, and Alteryx
- Developed customized **fuzzy matching** algorithm to match hospital names

Example 3: Customer/patient retention

- Discovered significant drivers of customer attrition through machine learning models

Example 4: Customer journey for e-commerce

- Revealed insights on customer behaviors when shopping online, especially around cross-shopping
- **Automated** faster insight generation with a web-based application using R Shiny

Infor Dynamic Science Labs, Cambridge, Massachusetts

Data Analyst

July 2014-Nov 2015

Successfully built predictive analytics into enterprise software to translate informative data into strategic business advantages. Introduced new technologies which received wide adoption within team. Actively contributed to business development and team growth, up from 8 to 17 members.

Example 1: Pricing Optimization in Distribution

- Optimized pricing decisions by creating models to maximize customer loyalty and business margin
- Extracted customer key performance indicators (KPIs) from transaction history using **SQL**
- Defined pricing buckets with **customer segmentation** using **hierarchical clustering**
- Created what-if analysis and computed price elasticity using **regression models**
- Identified sales opportunities through data exploration with **Oracle SQL**
- Initiated, designed, and implemented interactive web applications using R Shiny to deliver analytics results

Education

Cornell University

Master of Engineering in Applied Operations Research

May 2014

Johns Hopkins University

Bachelor of Science in Applied Mathematics and Statistics

May 2013