

SHUANG LIANG

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EDUCATION

University of Southern California, Marshall School of Business –Los Angeles, CA

May 2020

Master of Science in Business Analytic (STEM), Dept. of Data Sciences and Operations; GPA:3.8

WORK EXPERIENCE

Bank of the West – San Francisco, CA

Summer 2019

Digital Marketing Analyst Intern

- Streamlined and automated data processes for senior manager using **SQL** scripts to provide synthesized reports and dashboards with actionable insights for executive leadership
- Performed **hypothesis test** for 15 features to obtain top 3 significantly influencing factors, built a classification model via **Python** to provide solid analytical support for making rational business decisions
- Researched the online account opening process of 20+ competitive companies to assist in marketing adjustment across products on the platform and came out actionable suggestions

Tripalink Corp. (Real Estate) –Los Angeles, CA

Spring 2019

Project Development Intern

- Figured out candidate properties leveraging scenario analysis and sensitivity analysis complemented by financial ratios
- Created vivid visuals such as heat maps, built dashboards in **Tableau** after organizing and consolidating market price data from multiple resources, and reported market performance directly to stakeholders
- Automated weekly basis documents of profitability package based on **Tableau** and **Pivot Table** for senior management to help with investment strategies and summarized findings in a concise and convincing manner

BUSINESS ANALYTICS EXPERIENCE

Load Forecasting –Los Angeles, CA

Fall 2019

Project with Southern California Edison (SCE)

- Performed a two-layer time series model composed by XGBoost and ARIMA to establish a load forecast system on multiple horizons in **R**, having the yearly MAPE around 3% and the monthly MAPE under 2%
- Monetized the error generated by the predictive system to assess model goodness in terms of costs to the company, giving an approximate estimation of annual loss.

Fraud Analytics –Los Angeles, CA

Spring 2019

Course Project

- Collaborated with 5 peers to detect frauds, visualized and processed 500+ variables through feature engineering and feature selection (**PCA**), leading to several modified ML algorithms for 3 independent projects
- Computed the overall savings and visualized the cost-revenue-trade-off which indicates cutting off the top 5% anomalous records ranked by unusualness could at least save \$250,000

IMDB Movie Reviews Analysis –Los Angeles, CA

Spring 2019

Course Project

- Performed sentiment analysis (**NLP**) on movie reviews to automatically capture public voice for a certain film
- Undertook a hierarchical cluster model to present an overall understanding of the audience's flavor distribution
- Built 6 user profiles based on the frequency of bags of words in support of data-driven business strategies and recommendations for marketing future plans and investments

Frito-Lay Optimization –Los Angeles, CA

Spring 2019

Course Project

- Launched a transportation optimization complemented by BCG Matrix as a filter and realized in **Gurobi**, resulting in an effective distribution plan that balances most popular products and supply chain costs
- Produced an updated 250 SKUs portfolio with a 37% increase on the long-term growth rate as well as an annual distribution strategy which theoretically raises the total gross margin to 150 million dollars

ANALYTICAL SKILLS & OTHERS

- Experienced with **Python** in terms of data processing, regression, classification, clustering and model assessment
- Proficient with **R** and Excel regarding statistical analysis, time series analysis and BI dashboard (R Shiny)
- Skilled in ML Algorithms: decision tree, random forest, neural network, boosted tree, K means, KNN
- Expert in **Tableau** and **Adobe Analytics** for data visualization, dashboard reporting and automated weekly updates
- Excellent business acumen to discover and frame business problem and the ability to come out feasible strategies
- Native in Mandarin Chinese, Fluent in English