JEMMA TANG

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EDUCATION

DUKE UNIVERSITY, **The Fuqua School of Business** — Durham, NC
Master of Science in Quantitative Management: Business Analytics, Marketing — *May 2021*
Selected student pro-bono consultant with DISI, delivering projects for local non-profit clients
Data Science Coursework: Data Science for Business, Decision Analytics & Modeling, Data Visualization
Domain Coursework: People Analytics, Digital Marketing, Fraud Analytics

UNIVERSITY OF WISCONSIN MADISON — Madison, WI
Bachelor of Arts: Applied Mathematics in Finance Field — *May 2020*
Domain Coursework: Stochastic Statistics, Real Analysis, Derivatives Securities, Investment Theory, Econometrics

EXPERIENCE

PRICEWATERHOUSECOOPERS — Shanghai, China
Marketing Research Analyst Intern — *2019*

- Researched logistics sector and clients, integrating various statistical data and applying several methods, including SWOT, PEST, and KSF as part of client due diligence project
- Led team of three interns to develop survey for current and potential users of client's tracking software mobile app, A/B testing to optimize engagement and improve customer experience
- Examined market risk data for client's major product, using SQL to analyze per capita GDP, population density, and consumer price index for 100 cities targeted for potential product launch

PREMIERE CONSULTING GROUP — Beijing, China
Digital Marketing Analyst Intern — *2019*

- Launched digital marketing ad on various platforms; created and maintained daily and weekly dashboards tracking click through rate and user engagement to measure increases in brand awareness
- Created Tableau template to visualize data, reducing time for routine data collection and access by 90%
- Delivered customer segmentation and targeting report, defining and valuing new customer segments

SELECTED PROJECTS HTTPS://GITHUB.COM/JEMMATANG

Predicting Customer Churn for Consumer Bank (Kaggle, Python, Jupyter Notebook)
Developed model to predict customer churn probability and to determine key factors contributing to customer churn via Python. Preprocessed data by data cleaning, features encoding (one-hot encoding, ordinal encoding), standardization, and features reduction by analyzing feature importance. Trained three supervised machine learning algorithms including Random Forest, K-Nearest Neighbors, and Logistic Regression, and applied grid search and 5-fold Cross Validation to find optimal hyper parameters for each model. Evaluated model performance by calculating Ruc-Auc scores and confusion matrix (accuracy, precision, recall) of different models and selected Random Forest as best model (precision 0.758, AUC 0.832).

Analyzing Customer Reviews via NLP and Topic Modeling (Python)
Clustered reviews into different groups and discovered latent semantic structures in Python. Preprocessed text of customer reviews by loading stop words, implementing tokenization, stemmer function and discussing feature importance by Term Frequency – Inverse Document Frequency (TFIDF). Trained unsupervised machine learning models K-Means clustering and Latent Dirichlet Analysis (LDA), respectively. Analyzed clustering results and visualized training results by features reduction using PCA.

Dognition Web Analysis for Customer Retention (SQL, Tableau, Team-based)

Eliminated duplicated records and determined the primary key for each table. Created a relational schema of the database using ERDplus. Defined each table for issues, inconsistencies and problems after observing the trend and pattern over data.

TECHNICAL CAPABILITIES

Programming: Java, Python: Numpy, Pandas, Seaborn, Requests, Matplotlib, Sqlite3; C++, Stata, SQL
Machine Learning: Classical and Penalized Regression Methods: Lasso, Ridge; Decision Tree, Random Forest, K-Nearest Neighbors, K-Means, Principal Component Analysis (PCA)
Analysis Skills: Exploratory Data Analysis, Hypothesis Testing, A/B Testing, Natural Language Processing (NLP)
Tools: Tableau, Advanced Excel: VBA

ADDITIONAL INFORMATION

Love skateboarding: founded college street club. Enjoy creating and producing short videos, entering into competitions.