JINGJING (OLIVIA) LIANG

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EDUCATION

UNIVERSITY OF MINNESOTA, Minneapolis, MN
Candidate for **Master of Science in Business Analytics (**Carlson School of Management - STEM**)**   May 2020

MINZU UNIVERSITY OF CHINA, Beijing, China
Bachelor of Science (Honors) in Financial Management   June 2019
- Exchange student, University of Minnesota, Minneapolis (Fall 2017)

WORK EXPERIENCE

TCF National Bank, Minnetonka, MN, USA
Financial Analyst III, Treasury   August 2020 - Now
- Performed normalization and Clustering model on ~10K time series to identify customers with similar deposit growths and bucketed customer behaviors based on their PPP fund usage to discover program impact in deposit and churn rate.
- Created data model and ETL pipeline that enables auto-update using SQL and Python to ensure 3M+ daily deposit data and Covid economy data is ready for analytics, then visualized liquidity performance and risk management in Power BI dashboard.
- Built deposit time series forecasting model using LightGBM for 99 account types as well as analyzed seasonality and factors correlated, which increased the accuracy and efficiency of funding strategies by 60% (on-going).

CARLSON ANALYTICS LAB, Minneapolis, MN, USA
Data Science Consultant   July 2019 – May 2020
Client: Fortune 10 Healthcare Company
- Integrated 60M+ clinical data on AWS S3 and documented descriptive analysis and visualization using Redshift and Tableau.
- Tailored metrics for statistical similarity evaluation using KL-divergence and data reduction techniques such as Auto-encoder neural network, PCA, and t-SNE for visualization, which proved clinical data from GAN algorithms has over 95% similarity.
- Acted as an Engagement Manager, ensured timely communication to all stakeholders, created project timeline on Jira and worked with the team to achieve breakthrough on synthetic data methodology that enables confidential data sharing safely.

Client: Leading Hospitality and Entertainment Business
- Evaluated business impact of 100M+ coupons promotion and performed customer segmentation using clustering in Python.
- Optimized coupon allocation using Association Rules analysis, the result of which potentially increased 128k+ headcounts.
- Created a story-telling dashboard in Power BI, of which the presentation won the second place among 24 submissions.

Client: Mall of America
- Created a dynamic geo-dashboard in Tableau and transformed data into a compelling visual story that reports hourly hotspots.
- Explored 34K+ call logs using statistics and regression model to uncover calling patterns and forecast the number of calls.

IQIYI.com, Beijing, China
Data Analyst, User Growth Department   December 2018 - April 2019
- Integrated user data distributed among 30+ major mobile channels in MySQL and crafted periodic reports in Tableau.
- Assessed and adjusted data gap between local and cloud databases and increased the database quality and integrity by 40%.
- Collaborated with cross-functional teams to design analytical solutions for ad hoc demands and explain analytical results.
- Forecasted time series user data using Regression and ARIMA and created prototype in Excel and PowerPoint for reporting.

DELOITTE, Beijing, China
Risk Analyst   April 2018 - July 2018
- Conducted time series forecasting on 20k+ industry-level investment data using ARIMA model to uncover investment trends.
- Predicted investment risk using Logistic Regression and Decision Tree and identified factors that leads to high risk in Python.

DATA SCIENCE PROJECTS

Time Series Forecasting (RNN): Conducted feature engineering and built Seq2Seq model with LSTM on 296K+ training visit records to forecast the number of visitors on specific dates for 150 Restaurants, the result of which ranked in top 20% on Kaggle.
Movie Recommender System (NLP): Conducted dashboard visualization of movie ratings in Tableau on 20M MovieLens data and built Content-based and Collaborative Filtering Recommender System in Python based on user/item features to predict ratings.
Ad Click Prediction (Big Data): Performed batch processing and Random Forest modeling with Spark SQL and MLlib on AWS EMR to predict Ads CTR for digital marketing on 100 GB relational dataset, then built visualization dashboard using QuickSight.

SKILLS

Tools: MySQL, Python, R, Tableau, Power BI, AWS, MS Excel, MS PowerPoint, Hadoop, Hive, Spark, CPLEX, Jira, Stata, SPSS
Techniques: Data Visualization, Descriptive Analysis, A/B Testing, Machine Learning, Data Warehousing, Big Data, NLP