JERAD WILLIAMS

Data Science

CONTACT

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PROFILE

Passionate about working on complex problems with a great team.

EDUCATION

2020
SPRINGBOARD
DATA SCIENCE CERTIFICATION PROGRAM

2015
UNIVERSITY OF SACRAMENTO STATE
[SACRAMENTO, CA]
BACHELOR OF SCIENCE IN HEALTHCARE

TECHNICAL SKILLS

- Python (Scikit-learn, NumPy, SciPy, Pandas, PySpark Matplotlib, Seaborn)
- SQL (MySQL)
- Microsoft Office
- Machine Learning
- Time-Series Forecasting
- Natural Language Processing (NLP)
- Deep Learning
- Statistic and Probability
- Data Visualization

SOFT SKILLS

- Team Player
- Integrity
- Dependability
- Critical Thinking
- Effective Communication
- Proactive Problem Solving

EXPERIENCE

Jun 2020 – Sep 2020
Predicting Hospital Readmission with Discharge Summaries | Data Science | **Link**

- Built machine learning models using **Python**, **NLP** and **Deep Learning** to predict hospital readmission with discharge summaries to improve hospital resource utilization and reduce cost
- Features used: TF-IDF, One Hot Feature Vector Representation, Float Features, Word2Vec vectors
- Machine Learning Models used: **Logistic Regression**, Classification, Bernoulli Naive Bayes, Decision Tree, and **XGBoost**
- **Deep Learning** model used: **LSTM**
- **XGBoost model gave best result - 0.73 AUROC Score**, which is 0.02 less than the State-of-the-Art method which has a score of 0.75-0.76 AUROC (State of the Art method - https://arxiv.org/abs/1801.07860)

Mar 2020 – May 2020
Covid-19 Hospital Resource Forecasting | Data Science | **Link**

- Used Time-Series Forecasting via Autoregressive Integrated Moving Average models **ARIMA** and **SARIMA** to calculate how many COVID beds, ICU beds, and invasive ventilators would be needed for the coming year in the US
- Performed data imputation of missing values with the mean of the normal distribution of the feature
- Replaced outliers via quantile values
- Obtained an **MSE of 0 and RSME of 0**
- Predicted the requirements of the number of COVID-19 beds, ICU beds, and ventilators with **95% confidence interval**

WORK EXPERIENCE

Dec 2017 – Present
Supply Chain Analyst | ClipperCreek

- Implement **Excel** formulas to add necessary formatting to report spreadsheets and gained 15% reduction of overages.
- **Weekly presentations to key stakeholders** outlining project analysis, results, and recommendations.
- **Design and deliver weekly and monthly forecasting** reports in Excel to upper management based on analytical requirements
- Analyze forecast results versus actual performance to identify improvement opportunities
- Purchase and negotiate with vendors regarding materials, supplies, and equipment to fulfill shipments and orders

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WORK EXPERIENCE (CONT)

Oct 2016 – Nov 2017

Rehabilitation Assistant | Burger Physical Therapy

- Trained and exercised the disabled and injured, strengthening their bodies and emotional well-being for coping with disability
- Ordered and managed necessary clinical supplies
- Responsible for arranging transportation for severely disabled patients
- Maintained communication with patients and families through various media channels
- Prepared exercise and therapeutic plans based on individual patient needs

Mar 2007 – Sep 2016

Purchasing/Supply Chain | Vibra Hospital

- Prepared material requisitions, compared data on requisitions, invoices, and shipping notices for material received or issued to verify accuracy of order with limited assistance from supervisor
- Responsible for ordering materials, supplies, and medical equipment, and follow through with vendors on shipment and delivery
- Compiled and maintained data of quantity, cost, and types of items received, stocked, and issued.
- Compared data on requisitions, invoices, and shipping notices to material received or issued to verify accuracy of order.
- Contacted suppliers to solve missed deliveries, back orders, and price discrepancies.