






JERAD WILLIAMS

Data Science

Let's Continue to Win

CONTACT

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EDUCATION

2020
SPRINGBOARD
DATA SCIENCE CERTIFICATION PROGRAM

2015
UNIVERSITY OF SACRAMENTO STATE
[SACRAMENTO, CA]
Bachelor of Science in Healthcare

TECHNICAL SKILLS

- Machine Learning
- Time-Series Forecasting
- Natural Language Processing
- Deep Learning
- Statistic and Probability
- Data Visualization
- Programming Languages: Python (Sklearn, NumPy, SciPy, Pandas, Tensorflow, Keras), SQL
- AWS

SOFT SKILLS

- Integrity
- Dependability
- Critical Thinking
- Effective Communication
- Proactive Problem Solving
- Business Sense

PROJECTS

Jun 2020 – Sep 2020

Predicting Hospital Readmission with Discharge Summaries | Data Science Capstone | [Link](#)

- Built machine learning models using **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 Capstone | [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**

EXPERIENCE

2017 – Present

Supply Chain Analyst | ClipperCreek

- Managed a supply chain portfolio of five vendor accounts in Mexico and United States
- Purchase and negotiate with vendors regarding materials, supplies, and equipment to fulfill shipments and orders
- Maintain the performance of a supply chain from the initial order, to shipment, to billing, while delivering top tier customer service
- Obtained and negotiated quotes and agreements with transportation and raw materials provider

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Data Science and Healthcare

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EXPERIENCE (CONT)

2007 – 2016

Purchasing Assistant | 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.