

# JERAD WILLIAMS

## DATA ANALYST

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### TECHNICAL SKILLS

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- Python (Scikit-Learn, NumPy, Pandas, PySpark)
- SQL (MySQL, PostgreSQL)
- Microsoft Office (Outlook, Excel, PowerPoint)
- Machine Learning (ML) (Logistic Regression, Classification, Bernoulli Naive Bayes, Decision Tree, and XGBoost)
- Time-Series Forecasting (ARIMA, SARIMA)
- Natural Language Processing (NLP)
- Statistics and Probability (A/B Testing, Bootstrap Inference, Bayesian Inference)
- Data Visualization (Matplotlib, Seaborn, Tableau)

### EXPERIENCE

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#### **Predicting Hospital Readmission | Data Science Capstone Project | [Link](#)** June 2020 – September 2020

- Utilized NLP and Deep Learning techniques to build machine learning models to predict hospital readmission with discharge summaries to improve hospital resource utilization and reduce cost
- XGBoost ML building 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>)

#### **Covid-19 Hospital Resource Forecasting | Data Science Capstone Project | [Link](#)** March 2020 – May 2020

- Forecasted via Autoregressive Integrated Moving Average models ARIMA and SARIMA to calculate how many COVID beds, ICU beds, and invasive ventilators needed for the coming year in the US
- Predicted inventory requirements of COVID-19 beds, ICU beds, and ventilators with a 95% confidence interval

#### **ClipperCreek, Auburn, CA**

December 2017 – Present

##### **Data Analyst, Supply Chain**

- Maintained performance of a supply chain from the initial order, to shipment, to billing, while ensuring top tier customer service and resolving any business issues or concerns with limited assistance from supervisor or director
- Initiated daily with 5 departments and developed KPI's in Excel using data analysis, data manipulation, analytical models to identify trends, and pivot tables. Increased inventory accuracy by 8%
- Led weekly forecast meetings with upper management and stakeholders (for product requirements); created and enhanced forecast database in Excel; forecast data management presentation directly impacted product roadmap

#### **Burger Physical Therapy, Roseville, CA**

October 2016 – November 2017

##### **Rehabilitation Assistant**

- Implemented treatment interventions in a manual therapy, evidence-based practice clinic and adapted and modified plan of care with supervision from Physical Therapist
- Documented and coded requirements for insurance programs in timely manner with 100% accuracy
- Designed and presented supervision and education to family/caregivers involved in treatment and care of patients

#### **Vibra Hospital, Folsom, CA**

March 2007 – September 2016

##### **Supply Chain, Purchasing**

- Liaised with all departments to develop policies for inventory optimization for strategic results through effective reporting, research, monitoring and cross-functional engagement; contributed to 20% inventory reduction
- Initiated monthly meetings with upper management teams to achieve higher accuracy when ordering medical equipment; followed through with vendors on shipments and deliveries; decreased 15% of inventory surplus
- Collected data using mathematics to procure quantity, price, and types of items received, stocked, and issued

### EDUCATION

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#### **Springboard**

Data Science Certification Program

September 2020

#### **University of Sacramento State**

Bachelor of Science in Healthcare

June 2015