Ryan Jones

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I have always been intrigued by mathematical and statistical analysis, understanding the processes involved in real-world phenomena, and identifying solutions to difficult problems. In the past, this natural curiosity steered me to study numerous topics while in school and later helped me to graduate with a bachelor's degree in mathematics and a minor in statistics. On top of this, I have a *profound* interest in data analysis and modeling. My appetite for learning has led me to embark on a continuous quest for knowledge. I devote considerable time and effort into learning, refining, and practicing the required skills to successfully employ data science principles throughout my career.

Education

M.S. Data Analytics
University of Central Florida, Graduation date of May 2021

Curriculum focusing on statistical methods, preprocessing data, visualization, machine learning, cloud computing and data storage techniques. Classes culminate in a project designed to test knowledge of learned concepts.

B.S. Mathematics + Minor in Statistics
University of Central Florida, May 2015

Applied mathematics and statistics curriculum included machine learning adjacent studies, including differential equations, linear algebra, and numerical methods.

Work Experience

Business Analyst *August 2019 – present*
AeroCare Holdings Inc. (now AdaptHealth)

Enabled sales tracking through development of proprietary customer resource management tool using an Agile production process. I assumed various roles as needed - project manager, business analyst, tester, trainer - allowing me to gain experience in multiple domains.

Math & Statistics Teacher, *August 2016 – June 2019*
Wekiva High School

Increased Algebra I student test scores by 8%, on average, over the year prior by using targeted remediation derived from data analysis.

Named *Most Impactful Teacher* by top 5% graduating senior.

Completed Projects

Binary Classification Using Domain Knowledge

1st place in Big Data Analytics Symposium 2021 competition with the stated goal of disaggregating Orlando Utilities Commission customer load usage and classifying customers with an electric vehicle. Working with large data (25+ billion records in some tables) in a SnowFlake database, we were able to define a domain knowledge model that outperformed traditional machine learning models by achieving, on average, 10%+ higher accuracy, precision and recall.

Consumer Propensity Model

Constructed user-movie ratings models, utilizing KMeans and Alternating Least Squares algorithms, and employed PySpark as part of a graduate school project focusing on machine learning using cloud computing techniques to identify consumer propensity towards unseen movies.

More information at https://github.com/rybojones/MSDA-Recommendation-System

Binary Classification Using Machine Learning Ensemble

Collaborating with a team of close female peers in the Women in Data Science 2021(WiDS) worldwide data-thon organized by Kaggle, we created an ensemble model utilizing XGBoost and Linear Regression to identify ICU patients with Diabetes Mellitus. We were able to achieve an AUC score a mere 0.010 below the winning submission score, placing us firmly in the top-half of submissions. This experience was both exciting and educational and I plan on participating in future Kaggle events frequently to get exposure to new methodologies and continually grow my knowledgebase.

Natural Language Processing and Contextualization

Utilized natural language processing techniques to perform sentiment analysis and topic modeling for all U.S. Senate and House of Representative member Tweets in the month leading up to the 2020 Presidential election. These findings provided insight into the limitations of sentiment analysis on social media text and how context can be obfuscated when using such a technique.

Visuals at https://public.tableau.com/profile/ryan.jones1301#!/

Open Projects

Time-Series Modeling and Prediction
Working as a member of a small consultancy team for Southern States ToyotaLift to fulfill my Capstone requirement for graduation. We have been tasked with predicting the point in time that the maintenance cost per hour becomes greater than the purchase cost per hour of a forklift. We are using SCRUM software development process as we create a model to fulfill the business specifications and implementing this workflow using GitHub.

Optical Character Recognition (Upcoming)

With friends and members of my MSDA 2021 cohort, we plan to create a free-for-use tool that identifies text in an image, using OCR, and subsequently translates that text to the Braille print file format. We feel that this would help to reduce persistent costs surrounding replicating print material for the visually impaired, especially in special needs classrooms.

Tags

Python, R, SQL, Tableau, PowerBI, Excel, Git, Pandas, Numpy, SciKit-Learn, NLTK, Keras, PySpark, MPI4Py, Cloud Computing, Machine Learning, Matplotlib, Seaborn, Plotly, JavaScript, RMarkdown, GGPlot, Tidyverse, Jupyter, Observable

Visit my personal website at rybojones.github.io to learn a little more about me!