

S. MICHAEL FEDELL

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Education

Northwestern University | Evanston, IL

Sep 2018 - Dec 2019

Master of Science in Analytics (MSiA)

Cumulative GPA: 3.98

University of Oklahoma | Norman, OK

Aug 2015 - May 2018

B.S. Chemical Engineering, Minor in Spanish

Cumulative GPA: 3.95

Professional Experience

NASA Jet Propulsion Laboratory - *Data Science / ML Engineering Intern*

Jun 2019 - Sep 2019

Worked in the Office of the Chief Innovation Officer to build machine learning pipelines for numerous data science projects focusing on anomaly detection in time series streams. Coordinated work with internal mission teams and external client who provided operations telemetry for analysis.

Leveraged GPU's and high performance computing systems and optimized algorithms to reduce experimentation time by 60%. Deployed common framework and reporting system to monitor live experiments and track results.

BP North America - *MSiA Practicum Engagement*

Oct 2018 - Jun 2019

Designed a data pipeline and suite of predictive analytics tools to assess regional risk for commercial contracts as well as a comprehensive pricing analysis dashboard for the Planning and Optimization teams at BP.

Oseberg, Oklahoma City - *Data Analytics Intern*

Jun 2018 - Sep 2018

Developed a User Health Model based on 30 features across two thousand users to help guide customer retention teams and prevent churn. Stood up an automated ETL and weekly reporting system to deploy and deliver results. Led a data engineering project to onboard new data vendor. Published several python libraries for sustained use.

Irani Center for Creation of Economic Wealth (I-CCEW)

Nov 2017 - May 2018

Software Business Accelerator – Software Developer

Worked with team of 4 developers and 4 business analysts to create software solutions for small businesses and local entrepreneurs. Delivered a complete e-commerce platform custom-built from scratch for a large manufacturer.

Relevant Skills and Coursework

Data Mining, Analytics for Big Data, Cloud Computing, Deep Learning, Data Visualization, Reinforcement Learning, Text Analytics, Predictive Analytics, Databases, Analytics Consulting - Graduate Coursework

MEAN.js Full-Stack Web Development (mongo, express, angular, node) - I-CCEW Development Bootcamp

Favored Languages: Python, R, Java, HTML/CSS, Javascript, SQL, C++, C

Frameworks: Spark, Scikit-Learn, Flask, Hadoop, FastAI, Torch, Plotly, D3.js, React, Material UI

Other Skills: Linux, Docker, AWS, Mixpanel, Elasticsearch, Tableau, Information Retrieval

Academic Projects

Player Profiling in Just Cause 2 [*Gaming Analytics, Behavior Profiling, Churn Prediction, Research*]

Explored novel algorithms such as Bipartite Tensor Factorization for analyzing spatio-temporal player behavior in open world games. Results provided semi-autonomous feature extraction to improve on profiling and retention. Developed work with team of international researchers and presented results to various conferences/journals.

Album AI [*Computer Vision, Deep Learning, Web Application, Music Classification*]

Developed convolutional neural network models to predict music genre based on an album's cover art. Deployed web application to serve predictions and collect human guesses for benchmarking models.

InstaCart Profiler [*Cloud Computing, Ensemble Modeling, Cloud Computing, AWS, Model Deployment*]

Combined various modeling techniques (Clustering, Archetype Analysis, Linear SVM, PCA) to extract and predict order archetypes from the InstaCart dataset. Built an interactive web application around these models and deployed in the cloud using AWS resources. Project emphasizes modularity and model reproducibility.

Honors and Awards

- Gallogly College of Engineering's Outstanding Senior
- PE-ET 2018 Honor Society for Top 10 Seniors
- Eagle Scout - Highest honor in the Boy Scouts of America program
- Tau Beta Pi Engineering Honor Society - Top 8% of Engineering