John O'Donnell

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Education

Coursera: Data Science Professional Certificate — February 2020

The University of Texas at Dallas *Master of Business Administration* — January 2017 – March 2019

- GPA: 3.7

The University of Texas at Arlington *Master of Petroleum Geoscience* — August 2016 – May 2018

- GPA: 4.0

Texas A&M University *Bachelor of Science in Geology* — August 2012 – May 2016

- GPA: 3.2

Experience

Geologist | Data Scientist *Oasis Petroleum, Houston, TX* — June 2018 – March 2021

- Responsible for organization, analysis, and presentation of large, multidisciplinary, disparate datasets for over 15,000 oil and gas wells across multiple basins, each with monthly production values for oil/water/gas totaling over 1 million records
- Analysis completed exclusively in Python with Jupyter Lab using packages including Numpy, Pandas, Sci-kit Learn, SHAP, math, and Plotly
- Using data visualization packages such a Plotly, created meaningful and intuitive visualizations that conveyed complex relationships in a concise manner that drove large-scale change in our development program
- Used electric well log data and geologic maps (> 200,000 records) to create cluster analysis workflows defining geologic rock types that translate into higher/lower productivity in areas around the petroleum basin
- Extensive experience with tree-based ensemble methods such as Random Forest to untangle complex relationships between geologic and engineering datasets, leading to a more nuanced perspective of our asset and how to develop it
- Experience with Shapley analysis to further explain the relationships interpreted by tree-based methods
- Created and presented material stepping through complex machine learning algorithms and findings to senior management teams and non-technical staff to build confidence in results of the models built

Relevant Academic Coursework:

- Calculus 1-3
- Differential Equations
- Newtonian Mechanics for Engineering
- Electricity and Magnetism for Engineering
- Quantitative Risk Analysis
- Financial Management
- Advanced Engineering Economy
- Enterprise IT Architecture
- Information Technology for Management
- Data Visualization
- Managing Digital Strategy
- Corporate Finance
- Business Economics
- Interactive and Digital Marketing

Relevant Skills:

- Strong Python programming skills
- Working knowledge of SQL
- Strong time-management skills and a proactive mindset, self-taught data scientist
- Working knowledge of machine learning algorithms and their applications
- Ability to work in a multidisciplinary team, understand difference sources of data as well as their biases and uncertainties
- Strong communication skills, ability to navigate complex environments and explain then in an intuitive, succinct manner