

JOHN H. SCHWENCK

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EDUCATION

Texas A&M University

*The College of Science | Master of Science; **Statistics** – Computational Statistics Track*

**** Graduate Teaching Assistant (TA) – Principles of Data Science Using Python (Spring 2020)*

College Station, TX

Class of 2021

The Pennsylvania State University

*The College of Liberal Arts | Bachelor of Science; **Economics***

*Smeal College of Business | Bachelor of Science; **Supply Chain & Information Systems***

University Park, PA

Class of 2016

WORK EXPERIENCE

Halliburton (Cancelled due to COVID-19)

Research and Development Intern – Machine Learning for Upstream Drilling

Houston, TX

Summer 2020

South Jersey Industries

Senior Analyst | Strategic Analytics & Corporate Development

Atlantic City, NJ

June 2016 – April 2019

- Developed a machine learning model in R for the Damage Prevention team using geospatial data to generate pipeline failure probabilities at various locations for gas leak prevention and other potentially fatal situations
- Utilized VBA to streamline the budgeting process for SJI's Solar subsidiary that automated manual entry of over 10,000 historical outage reports using text document NLP for impairment and stress testing purposes

RESEARCH EXPERIENCE

Academic Research

Applied Cognitive Ergonomics (ACE) Lab

Lead Statistician

College Station, TX

September 2019 – Present

- The Applied Cognitive Ergonomics Lab (ACE-lab) is a multi-disciplinary research laboratory focused on human-centered design, development, and testing of complex human-systems.
- Consult and oversee statistical modeling in experimental design for accuracy and legitimacy before publication

Penn State Energy Marketing Association (P.S.E.M.A.)

Founder | Director of Macroeconomic Research

University Park, PA

July 2015 – May 2016

- Established the organization to bridge the gap between technical and non-technical backgrounds who shared a mutual interest for the energy industry and a desire to further their knowledge through cross-disciplinary research
- Directed all research efforts for monthly market outlook newsletters by conducting statistical analyses for each of the four core focus areas (Oil, Gas, Weather, and Economy)
- Prepared weekly presentations that taught both physical and economic aspects of the energy supply chain

Independent Research

Commodity Market Research

College Station, TX

- Investigating the applicability of Bayesian Network and Stochastic Models to evaluate natural gas physical markets and electricity markets based on fundamental factors of the energy supply chain
- Optimize trading portfolios by predicting the likelihood of the natural gas trade volumes receiving a “supply cut” during the pipeline nomination process (natural gas markets) and determine the directions of power flows during transmission line congestion for both real-time and day-ahead markets (power markets)

Riding for Research – A Cycling Trip Across North America

United States & Canada

- Pedaled a 1991 Cannondale M1000 bicycle 6,000 miles from New York City, New York to Seward, Alaska to collect granular fitness, dietary, and cardiac related data through various health tracking sensors for an initial pilot study
- Study divided into 3 phases, consisting of exercise, diet control, and stress management, to assess trends in cardiac performance as measured through blood pressure, heart rate variability, and other health indicators
- Plan to develop a mobile application that will allow for replication and representative data collection

SKILLS & INTERESTS

Programming: R, Python, SQL, VBA, Git/GitHub, Stata

Software: Excel, Power BI, LaTeX, Bloomberg, SharePoint

Research Interests: Bayesian Machine Learning, Natural Language Processing, Network Models, Imputation methods

Non-academic Interests: Cycling, skiing, reading, chess, history, saxophone, poker, NY Giants