MICHAEL ELLIS

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PROFILE

- Data scientist experienced in using advanced statistical and machine learning methods to improve decision making in business applications.

- Experienced with R, Python, SQL and Git.

EXPERIENCE

Data Scientist, Black Hills Energy

Fayetteville, AR   December 2018 - March 2020

- Directly responsible for building statistical and machine learning models to analyze, predict and quantify uncertainty of weather and energy consumption, with the goal of helping senior business leaders to improve decision making.

- Forecasted energy demand for 1.2M customers in 8 states improving accuracy by 14% using advanced time series methods.

- Developed several R-Shiny web applications. Including an application to calculate the optimal climate normal for each NOAA weather station in the service territory.

- Applied hierarchical linear model to estimate the association between unemployment rate, natural gas prices, and unpaid bills.

Graduate Teaching Assistant, University of Arkansas

Fayetteville, AR   August 2016 - May 2018, August 2020 - Present

- Instructor for Principles of Statistics (STAT 2303).   2017-2018, Fall 2021
  - Course covering an introduction to probability theory, hypothesis testing and regression analysis. Taught 2 course sections of approximately 40 students each semester.

- Drill instructor for Pre-Calculus (MATH 1284).   2016-2017, 2020-2021.
  - Course covering algebra and trigonometry. Taught 3 course sections of approximately 30 students each semester.

- Student evaluations:
  - "Michael is a great teacher who cares about his students and always tries to help. He thoroughly enjoys stats and helps you apply it to the real world."
  - "Michael is very good at making difficult things understandable and he is also very concerned with how everyone is doing, which is awesome!"

EDUCATION

University of Arkansas, Fayetteville

Doctor of Philosophy, Mathematics(In progress)   August 2020 - Present

Master of Science, Statistics   December 2018

- Thesis: Sequential Inference for Hidden Markov Models
- Advisor: Dr. Giovanni Petris

Bachelor of Science, Applied Mathematics   May 2016