

# MICHAEL ELLIS

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## PROFILE

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- Data scientist experienced in using R, Python, C++, SQL, Git and advanced statistical and machine learning methods to improve decision making within complex real-world problems.
- Examples of my work, including full Bayesian inference for Gaussian process models, time series analysis and forecasting using dynamic linear models, and an R package for variational inference for Dirichlet process mixture models, can be found on my GitHub at <https://github.com/michaelellis003>

## EXPERIENCE

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### Data Scientist, The Home Depot

Fayetteville, AR

May 2022 - Present

- Part of Home Depot's conversational AI team responsible for applying natural language processing and understanding techniques to improve Home Depot's internal voice response and Chat and Messaging platforms.

### Data Scientist, Black Hills Energy

Fayetteville, AR

May 2018 - March 2020

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

### Graduate Teaching Assistant, University of Arkansas

Fayetteville, AR

August 2016 - May 2018, August 2020 - May 2022

- Instructor for Principles of Statistics (STAT 2303).
  - 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).
  - Course covering algebra and trigonometry. Taught 3 course sections of approximately 30 students each semester.

## EDUCATION

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University of Arkansas, Fayetteville

### Master of Science, Statistics

December 2018

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

### Bachelor of Science, Applied Mathematics

May 2016