Eric Cooper

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SKILLS

Programming Languages Python, SQL, R, MATLAB
ML Tools & Packages TensorFlow, Keras, Pandas, Numpy, Scipy, sklearn, matplotlib
Big Data Platforms Jupyter, AWS Sagemaker, Apache Airflow, dbt, Snowflake, Docker
ML Skills neural networks/deep learning, Bayesian decision, regression, classification

EXPERIENCE

Data Scientist, Teikametrics, Boston, MA **Jul 2020-Present**

- Collaborated with scientists and engineers to design, maintain, and enhance a multi-channel digital advertising auction bidder as a member of the Artificial Intelligence team for an e-commerce company
- Provided modeling on various machine learning projects including deep learning time series forecasting and keyword recommendations as they pertained to the auction bidder
- Deployed and maintained ML models via Sagemaker and Apache Airflow
- Investigated and communicated AI capabilities to internal stakeholders, customers, and engineers on other teams as part of AI support
- Retrieved data for analysis and use in ML models by writing ETL transforms using SQL and dbt (data build tool)
- Published 5 e-commerce articles relating to the work of the AI team to be used as marketing materials to attract and retain customers

Insight Data Science Fellow, Insight Data Science, Boston, MA **Jan 2020- Jul 2020**

- Designed and deployed a Dash-based web app that allows government entities or other users to identify the location of probable lead water service lines in New York City
- Trained and evaluated logistic regression, random forest, and naive Bayes classifier models to assign probability of the existence of a lead water service line
- Cleaned and combined 600k+ New York City public housing records and U.S. Census data containing housing value, construction date, lot size, neighborhood demographics, and GIS data
- Engineered geospatial features to augment data acquired for use in water service line prediction

Instructor, Boston University, Boston, MA **Jun 2013 - Aug 2019**

- Taught 9 mathematics courses during summer semesters in Applied Statistics, Calculus I, Calculus II, Multivariable Calculus, Linear Algebra, Ordinary Differential Equations to classes of 20-35 students
- Integrated demonstrations in R into lesson plans for Applied Statistics course to teach regression, hypothesis testing, and ANOVA
- Collaborated with faculty to design semester curricula, including daily lectures, quizzes, and midterms and final examinations

Graduate Researcher, Boston University, Boston, MA **Sep 2012 - May 2019**

- Developed the mathematical framework to explain phenomena of randomly forced fluids observed by physicists
- Simulated randomly forced dynamical systems using Monte Carlo methods and parallel computing in MATLAB on a shared computing cluster
- Derived finite-dimensional models of stochastic processes to analyze statistics and behavior of randomly forced systems of partial differential equations resulting in 2 publications to journals focused on nonlinear science, engineering, and mathematics

EDUCATION

Ph.D. in Mathematics, Boston University **May 2019**
M.A. in Mathematics, Boston University **May 2014**
B.A. in Mathematics, University of Virginia **May 2012**