Zo Webster

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Data scientist with background as physics professor. Insightful and analytic thinker, pragmatic to the core. Skilled technical communicator and self-starter. Experienced in organizing people and managing time-critical projects. Learning is my passion. Working with diverse minds to make a difference is my joy.

SKILLS

Certifications: AWS Certified Cloud Practitioner | PCEP – Certified Entry-Level Python Programmer | Certified Scrum Master (exp. Dec 2024) | SAS Certified Specialist: Base Programming Using SAS 9.4
Coursework: Data Mining | Logistic Regression | Time Series Forecasting | Customer Analytics and Experimental Design | Machine Learning | Statistical Methods | Financial Analytics | Big Data | Bayesian Statistics | Optimization | Technical Visualization | Simulation and Risk

EDUCATION

Master of Science in Analytics   May 2023
Institute for Advanced Analytics, NC State University, Raleigh, NC
- Classification of potential annuity investors using logistic regression, random forest, XGBoost in R.
- KNN clustering to identify patterns in social media users, variable clustering for feature reduction.
- Tableau dashboard for tennis player and team analytics visualizations to help tournament strategy.
- Monte Carlo simulation of profitability of oil drilling investment in R.
- Web scraping exercise for CIPS codes in Python.
- Energy use forecasting for electric utility using ARIMA, neural net time series models in R.
- Marketing power analysis calculation for proposed changes to shopping website using Google Analytics.
- Logistic Regression model using Spark.
- SQL queries on AWS Hive, Google Cloud BigQuery.
- Real estate price predictions using online data for Pearl Hacks hackathon event in Python.

Doctor of Philosophy in Astrophysics
University of California, Berkeley
- Unix (bash) shell scripts for C/Fortran simulations of protostellar regions as part of data analysis pipeline for interferometric observations of radio continuum and molecular spectra at millimeter wavelengths.

Bachelor of Arts in Physics, *magna cum laude and with high honor*
Mount Holyoke College

PRACTICUM

General Mills
Scrum Lead for five-person team answering questions posed by General Mills' data science team over 7 months as part of Master's level practicum project.
- Leverage supervised machine learning (ML**)** techniques to contrast the predictive and explicative power of baseline sales models in Python.
- Identify strengths and weaknesses in the final models and provide industry-specific interpretation to non-technical end users using lift and accuracy metrics.
- Analyze 3 years of weekly retail scanner data across 500 products at a market level to identify and present actionable insights and key findings to General Mills data science and business teams.
- As scrum lead, oversaw daily scrum, sprint retrospective, and helped team-lead curate backlog.
- Implemented version control, documentation, and issue tracking in GitLab.

PROFESSIONAL EXPERIENCE

North Carolina State University (NCSU) — Raleigh, NC
Asst. Teaching Prof., Coordinator Physics for Engineers — Nov 2017—July 2022

- Demonstrated exceptional time management and prioritization skills while managing multiple projects for labs, recitation, and assessments with tight deadlines.
- Directed efforts of ten graduate students to create and implement online curriculum during Covid-19 transition.
- Coordinated intergroup activities of individuals outside of my direct reporting line to harmonize the workflow for multi-section Physics course sequence serving over 1000 student per semester.
- Trained and mentored faculty (8-12 per semester) and teaching assistants (20-35 per semester) in technical tools.
- Proficiently and rapidly optimized workflows and integrated best practices during the changing environment during the Covid-19 pandemic. Leveraged efficient processes and technical troubleshooting skills to support a seamless transition for 20+ faculty and 2000+ students while maintaining high academic quality.
- Designed operational sequences and performed code review for adaptive learning physics course as part of Engineering success via online tools grant.
- Strong technical communication skills practiced during classroom and one-on-one instruction.
- Drove process transformation as a change agent and successfully implemented process optimization strategies for integrated system of lecture, lab, recitation, and online classes at NCSU.

North Carolina School of Science and Mathematics (NCSSM) — Durham, NC
Physics Instructor — 2011 – 2017

- Taught Physics, strengthened problem-solving skills, and amplified confidence in critical thinking with structured lecture and laboratory activities at high school level.
- Girls Who Code club learning facilitator.

Columbus State University (CSU) — Columbus, GA
Asst. and Associate Professor Physics — 2004 – 2011

- Budget and progress reporting for $1.2 million NASA grant.
- Transformed secondary science education degrees as part of cross-disciplinary team.
- Coordinated statistical study of 9 factors leading to success in introductory science courses.
- Technical storytelling through research and education posters and presentations. Entertained and educated cruise ship passengers about cosmic collisions and astronomical events.

HONORS

- Phi Beta Kappa
- Sigma Xi
- Phi Kappa Phi
- Sigma Pi Sigma