Ning O.

Hartford County, CT
860-977-9408 • fellowship@upotential.org

PROFILE

Strong research technologist practiced in state-of-the-art data analysis and model development with experience delivering solutions for non-profits, environmental and human-factors scenarios.

KEY SKILLS AND COMPETENCIES

- Critical thinking, scientific writing, and presentation skills
- Statistics, Data Analysis, Machine learning
- Bayesian Analysis, Spatial analysis, Optimization
- R, SAS, WinBUGS, JAGS, C, Mathematica, Linux, LaTeX

EXPERIENCE

Wesleyan, Middletown, CT (1 years)
Teaching, Course Development and Consulting

- Applications of Machine Learning; Introduction to Bayesian Analysis
- Applied Data Analysis; Introduction to Statistical Consulting
- Supported students using regression models and/or machine learning models to generate insights about recidivism from over 10,000 data lines for a CT halfway house program
- Spatial data analysis in Geology: Used sequential Gaussian simulation to generate maps of CO2 flux in Paulina Lake from a sparse data set
- Bayesian data analysis in Psychology: Set up the framework to study the impact of prior knowledge on the perception of length and time

University of Massachusetts, Amherst, MA (2 years)
Statistics, Machine Learning, Statistical Computing Coursework

- Probability and Statistics, Hypothesis Test, Regression Analysis, Bayesian Statistics, Design of Experiments, Time Series Analysis, Machine Learning, Statistical Computing (R, SAS)
- Applied machine learning methods of random forest, gradient boosting and support vector machine achieving 75% of test accuracy

University of Massachusetts, Amherst, MA (5 years)
Computational polymer physics - Polymer Translocation

- Studied the stochastic processes of polymer translocations and compared the differences between the linear and the ring polymer; produced the probability distribution function of their translocation times
- Polyelectrolyte Brush: Studied the properties of the charged, grafted polymer layers in salty solutions by minimization of free energy function in multi-dimensions
- Wrote hundreds of lines of C codes and Mathematica codes to solve stochastic differential equations and to achieve multi-dimensional optimization

EDUCATION AND CERTIFICATION

Ph.D. in Physics University of Massachusetts
Master in Statistics University of Massachusetts Amherst
Master in Physics University of Massachusetts
B.S. in Physics Tianjin University

PUBLICATIONS

Scholarworks @UMassAmherst: Translocations of Ring and Linear Polymers & Polyelectrolyte Brush in Salty Solution, 2016.
American Physics Society: Presented in March Meeting, 2015.

INTEREST

Chinese Calligraphy
- Organized Chinese calligraphy workshop for neighborhood moms.