

DON BRUCE FOX

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RECENT EXPERIENCE

The Data Incubator

Data Scientist in Residence

September 2017 - Present

Boston, MA

- Train MS and PhD degree holders in the field of data science through an 8-week fellowship program
- Lecture on data science topics such as supervised and unsupervised machine learning algorithms, natural language processing, and time series analysis
- Supervise, evaluate, and provide feedback on data science capstone projects of program participants

GreenFire Energy

Model Developer

February 2016 - June 2017

Emeryville, CA

- Analyzed GreenFire Energy's proprietary technology to provide an independent assessment
- Developed numerical models of mass and energy transfer to generate thermodynamic data of their process
- Generated economic performance data through numerical simulations to attract potential investors

Cornell University

Graduate Research Assistant

January 2010 - January 2016

Ithaca, NY

- Modeled the thermal hydraulic behavior of discretely fractured geothermal reservoirs
- Developed a finite element method code for forward modeling of geothermal reservoirs
- Deployed an ensemble of geothermal reservoirs to describe behavior using probabilistic descriptions
- Solved inverse problems using PCA, genetic algorithms, and reservoir tracer tests to predict reservoir geometry and thermal performance
- Improved accuracy of thermal performance prediction by a factor of five compared to the base case
- Analyzed U.S. energy data to quantify geothermal's potential for direct use applications

SKILLS

Technical: machine learning (supervised & unsupervised), data analysis, natural language processing, FEM, Monte Carlo simulations, genetic algorithms, and inverse problems

Computer: Python (including NumPy, SciPy, pandas, scikit-learn, & Flask), MATLAB, SQL, Bash, Linux, Hadoop/Spark, TensorFlow, Git, HTML, Drupal, and L^AT_EX

Language: English (native speaker) and Spanish (native speaker)

SELECTED PUBLICATIONS

Peer-Reviewed Publications: 5

First Author: 4

Citations: 94

Full Publication List: <https://scholar.google.ca/citations?user=DdEBP5sAAAAJ&hl=en&oi=ao>

“An analytical thermo-hydraulic model for discretely fractured geothermal reservoirs.” *WRR* (2016)

“Sustainable heat farming: Modeling extraction and recovery in discretely fractured geothermal reservoirs.” *Geothermics* (2013)

EDUCATION

Doctor of Philosophy, Chemical Engineering, 2016

Cornell University

Master of Science, Chemical Engineering, 2014

Cornell University

Bachelor of Science, Chemical Engineering, 2010

Massachusetts Institute of Technology