ZELONG (ERIC) ZHANG

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Data scientist with 5+ years in computational modeling and data mining. Experienced at applying machine learning models (classification, regression, and time-series) to discover data stories.

SKILLS

Programming: Proficient in Python, Bash, High-Performance Computing (HPC, AWS), SQL
Familiar with Tcl, HTML, CSS

ML libraries: scikit-learn, statsmodels, Matplotlib, Bokeh, Natural Language Processing, TensorFlow

Quantitative: Statistics & Probability, Linear Algebra, Multivariable Calculus, Optimization Methods

EXPERIENCE

Intern, Ongo Science Inc, San Francisco, CA — Sep 2020 – Oct 2020

- Developed a predictive model to forecast user churn in THE RUN EXPERIENCE ™, a fitness app
- Fined-tuned NLP BERT model by hand-labelling to extract text sentiment (F_1 0.89)
- Provided a 4-week time window for Ongo to intervene users at high risk of churning (AUC 0.87)
- Performed descriptive analysis to estimate customer lifetime value using time-series data

Reviewer, NeurIPS, Machine Learning and the Physical Sciences — Since 2019

Trainee, Deep Learning Summer School, Lawrence Berkeley National Laboratory — Jul 2019

- Obtained hands-on experience of TensorFlow 2.0 on high-performance computers

Research Assistant, Geology & Geophysics, Louisiana State University — Sep 2014 – Aug 2020

Predict material formation of binary systems using machine learning algorithms

- Applied a stacked ensemble (Random Forest, LightGBM, Naïve Bayes, etc.) to improve prediction
- Identified 18 key features, improved model prediction by 38%, accelerated materials discovery

Forecast environmental degradation rates of nuclear waste materials using regression analysis

- Developed predictive models using time-series data to improve nuclear materials disposal safety
- Produced an award-winning short film showcasing cross-team synergy (US Dept. of Energy 2019)

Identify optimal condition for shale oil extraction using molecular modeling on HPC

- Investigated oil recovery from shale nanopores using molecular dynamics simulations
- Generated and analyzed data on the scale of terabyte to predict optimal temperature and salinity

Teaching Assistant, Geology & Geophysics, Louisiana State University — Jan 2020 – May 2020

- Produced lab lecture videos for 15 non-major college students to continue their study remotely
- Re-designed lab courses and built a website on GitHub hosting class materials for remote access

EDUCATION

Ph. D. in Computational Geochemistry, Louisiana State University, Baton Rouge, LA — Sep 2020

Dissertation: Investigating Geochemical Processes on Materials Related to Energy and Environment

- Honor, Leadership LSU (2015)

M. Sc. in Biogeochemistry, Stony Brook University, Stony Brook, NY — May 2014

Thesis: NMR Investigation of Organic Phosphorus in Calcite

B. Sc. in Geochemistry, China University of Geosciences, Wuhan, China — Jul 2010

Thesis: Biomarker Distribution in Stalagmite as a Record of Microbial Response to Climate