

ZELONG (ERIC) ZHANG

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SKILLS

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

ML libraries: Matplotlib, Bokeh, scikit-learn, NLP, fastai, PyTorch, TensorFlow

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

EXPERIENCE

Fellow, Insight Data Science, San Francisco, CA Sep 2020 - Present

- Perform NLP to analyze user data of THE RUN EXPERIENCE™, a fitness app from Ongo Science
- Predict user subscription using Logistic Regression and Random Forest: achieved F_1 score 0.8
- Identify key factors of user conversion such as text length, engagement frequency, sentiment, etc.

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

- Investigated materials corrosion by collaborative research with experts in glass, metal, and ceramics
- 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](#))
- Investigated oil recovery from shale nanopores using molecular dynamics simulation
- Identified optimal temperature and salinity for oil extraction and co-wrote funding proposals
- Initiated and coordinated collaborations with Shell Netherlands and Citrine Informatics

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

Research Assistant, Geosciences, Stony Brook University, NY Aug 2011 – May 2014

- Developed a methodology using solid-state NMR to characterize organophosphates in calcite
- Processed time-series signals into frequency-based spectra by Fourier-transform

PROJECTS

Materials Stability Prediction, Citrine Informatics, Redwood City, CA Aug 2020 - Sep 2020

- Applied a stacked ensemble and Random Forest to predict phase stability of binary systems
- Identified 18 key features and improved product model prediction by 38%: achieved F_1 score 0.60

IEEE-CIS Credit Card Fraud Detection, Kaggle Data Challenge Jul 2020

- Cleaned and explored transaction data of over 400 features and of high imbalance
- Trained Random Forest, LightGBM, XGBoost, and Logistic Regression models for classification
- Improved precision and recall by features selection and optimization: achieved F_1 score 0.71

EDUCATION

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

Honor, Leadership LSU, Louisiana State University, Baton Rouge, LA Apr 2015

M. Sc. in Geochemistry, Stony Brook University, Stony Brook, NY May 2014