

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 BERT to analyze text data of THE RUN EXPERIENCE™, a fitness app from Ongo Science
- Extract features from text data to predict user conversion and churn by classification algorithms
- Identify key factors related to user decisions such as text length, 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%

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 (2015)

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