TJ Slezak

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📞 (602) 354-0733 in tslezak

Education

Certificate | Data Science
Galvanize Inc. | 2019

M.S. | Geology
Brigham Young University | 2017
- Statistical shape analysis of craters

B.S. | Earth & Space Exploration (Geological Sciences)
Arizona State University | 2015
- Minor: Sci., Tech., & Society

Skills

Programming
Python
R
Julia
Unix/Linux

Data Analysis
Pandas
Numpy
SciPy
scikit-learn
statsmodels
BeautifulSoup
PyViz
NLTK
Tensorflow
Tableau

Database Management
SQL
MongoDB
REST APIs
JSON
Bash
Git

Big Data
Apache Spark
Hadoop
MapReduce
Hive
AWS, GCP, Azure
Docker

Community

DesertPy Co-Organizer
2018 - Present

Experience

Galvanize | Data Science Alumni
Winter 2019 - Present
- advanced data science skills through projects and collaboration
- predicted Phoenix metro hit & run accident frequency using open data
- examined use cases for modern satellite data in machine learning applications

Brigham Young University | Research & Teaching Assistant
Fall 2015 - Winter 2017
- investigated how landform morphology relates to geologic processes
- delivered science content and materials at the university level
- developed course curriculum to meet new educational objectives

Lunar and Planetary Institute | Exploration Intern
Summer 2016
- planned a human-telerobotic mission on an international team for NASA HQ
- prepared & analyzed global lunar datasets
- identified high-value science targets for future lunar exploration

Arizona State University | Pancam Research Aid
Fall 2013 – Summer 2015
- processed & calibrated raw imagery acquired by the Opportunity (MER) rover
- Developed Python and Bash scripts to assist with operational objectives
- co-managed science team workstations, servers, & scientific software

NASA Jet Propulsion Laboratory | Intern
Summer 2014
- updated slope stability analysis for thermal constraints to refine predictions
- constrained the mechanical strength and composition of Io's upper crust

U.S. Geological Survey, Astrogeology Branch | Research Associate
Summer 2013
- tested the strength of Io's crust using observations and proposed compositions
- performed slope stability analysis on 50+ physical and material variables

Projects

Geomapper - https://github.com/tjslezak/capstone </>
- A predictive geologic mapping tool using multi-spectral satellite imagery and a convolutional neural network model to map regions of Arizona's geology.

Allender E.J., et al. 2018. Traverses for the ISECG−GER Design Reference Mission for Humans on the Lunar Surface. Advances in Space Research. 🔗

Slezak T.J., J. Radebaugh, and E.H. Christiansen 2018. Quantitative Morphological Classification of Craterforms Using Multivariate Outline-Based Shape Analysis. Lunar Planet. Sci. XLVIII, #2640. 🔗