Elizabeth **Menezes**

RADAR Specialist, Raster Product Engineer | Esri

(+1) 909-369-2772 | designer.elizabeth.ashley@gmail.com | elizabeth-ashley.github.io/ | @seismacita

Education

University of Colorado Boulder
Boulder, Colorado

Master of Science in Geophysics
Aug 2020 - Dec 2022

- Specializing in Seismology and Geodesy
- **Researching** remote sensing applications to induced seismicity

The University of Texas at Austin
Austin, Texas

Bachelor of Science in Geophysics
Aug 2014 - May 2018

- Program through the Jackson School of Geosciences

Skills

- **Adobe Illustrator, Photoshop and InDesign** — for **graphic design** and **scientific illustrations** such as original vector designs, production layouts, infographics, and other visual designs across a variety of print and digital platforms
- **Hypertext Markup Language (HTML), Cascading Style Sheets (CSS) and JavaScript** — for utilizing markup, styling and programming languages to produce visually interesting web products for my **portfolio**
- **ArcGIS/ArcMap, QGIS/GDAL, GMTSAR** — for geoprocessing, spatial analysis and making high quality map layouts
- **Python/Jupyter Notebooks** — for **numerical modelling**, data visualizations and animations
- **MATLAB** — for graphing data and statistical analysis
- **LaTex and Markdown** — for formatting report layouts, documents and presentations
- **Tableau and D3** — for creating various types of digital communication and motion graphics

Work Experience

Esri - Environmental Systems Research Institute, Inc.
Remote

RADAR Specialist, Raster Product Engineer
Sep 2022 - Present

- Design and test RADAR capabilities for Esri's flagship GIS application (ArcGIS Pro)
- Collaborate with software developers on software project teams to help build new software and plan for future releases
- Help test new RADAR processing and analysis user experiences, workflows, and analytics using customer data
- Support technology demonstrations for industry events

U.S. Bureau of Reclamation
Denver, Colorado

Seismic Hazard Intern
May 2021 - July 2021

- Worked on an induced seismcity project associated with salinity control injection wells in Paradox Valley, CO
- Explored different proxy methods to estimate the time-averaged shear-wave velocity through 30 m below the ground surface
- Improved Vs30 models by incorporating geologic information using ARCMAP and R scripting skills
- Contributed to Probabilistic Seismic Hazard Analysis (PSHA) source inputs

Inspiring Girls Expeditions, Girls on Rock
Boulder, Colorado

Science and Art Instructor
Dec 2021 - Present

- **Girls on Rock** - a wilderness science education program for high school girls from minority and disadvantaged backgrounds
- Educated the students during a two week program on how to conduct scientific research and integrate art as a communication tool for their findings

Halliburton Energy Services Inc.
USA/Norway

Field Engineer/Geosteering Geoscientist
Sep 2018 - Sep 2020

- Tested and manually assembled tool strings for downhole data acquisition
- Provided file information from surveys such as measured depth, true vertical depth, azimuth, inclination to directional drilling team
- Handled real-time drilling operations in order to execute all field engineering technical duties for jobs in the North Sea
- Delivered pre-well modelling, real-time interpretations, and post-well analyses to client

Denali National Park
Denali, Alaska

Science Communication Intern for U.S. Department of the Interior
May 2018 - Aug 2018

- Educated children in the field on topics such as geoscience, biology, ecology and leave no trace ethics
- Created eight life sized **museum exhibits** for the winter visitor center using Adobe Illustrator
- Edited and designed a children's outdoor educational book: **Denali for Families: A Visitor's Guide to Denali National Park and Preserve**

Research Experience

University of Colorado Boulder, Department of Geological Sciences
Boulder, Colorado

Graduate Research Assistant for Anne Sheehan and Kristy Tiampo — *Aug 2020 - Aug 2022*

- Gathered earthquake catalogs located in the Raton Basin for preparation to perform statistical analysis
- Processed Interferometric Synthetic Aperture Radar (InSAR) data to measure and create a surface deformation time-series
- Analyzed seismicity data and fault parameters in induced systems to determine the role earthquakes play in triggering more earthquakes

Gulf Basin Depositional Synthesis Research Group
Austin, Texas

UT Institute for Geophysics Undergraduate Research Assistant — *Aug 2017 - Jan 2018*

- Edited, geo-referenced, digitized and constructed map products in ArcGIS
- Located, accessed and scanned geologic data (well, paleontology, literature and seismic)
- Digitized raster well logs to digital LAS format using Neuralog software
- Loaded seismic and well data into seismic interpretation software (Landmark)

Research with UT professor Dr. Charles Kerans
Austin, Texas

Undergraduate Research Assistant — *Jan 2016 - Jan 2017*

- Characterized the geomorphology and sequence stratigraphy of Pedernales Falls in search for Smithwick Shale to provide evidence and explanation of the waterfall's location
- Traversed and outlined the research site at Pedernales Falls State Park, Texas
- Classified and categorized using the Folk classification scheme for observations and measured rock hardness with a Schmidt Hammer

Writing & Presentations

Geodetic Techniques Applied Towards Understanding Induced Earthquakes in Raton Basin, Colorado & New Mexico
New Orleans, Louisiana

Author — *2021*

- **Technical poster** to share my research findings from Sentinel-1 satellite data at the American Geophysical Union (AGU) 2021 conference
- I utilized Adobe InDesign to create the poster and python to create the figures

Geomapping: A solution for Discovering Potential Reservoirs with Ultra Deep Azimuthal Resistivity
Stavanger, Norway

Author — *2020*

- Technical paper with Halliburton written for publication, but discontinued due to leave from company
- Focused on mapping the subsurface of a field in the North Sea

Ultra Deep Dive into the Benefits of using Ultra Deep Azimuthal Resistivity and Geosignal Images
Houston, Texas

Author — *2019*

- Technical poster for internal distribution within Halliburton
- Highlighted the use of an ultra deep azimuthal resistivity tool to overcome the potential challenges that arise with low resistivity contrasts, gradational boundaries, and seismic uncertainty

Geosteering Pre-well Report on Modelling Low Resistivity Contrasts with Gradational Boundaries
Stavanger, Norway

Author — *2019*

- Internal Halliburton presentation for a global webinar with attendees from Saudi Arabia, Europe, and the Americas
- Presented findings from a geological model using inverted deep resistivity measurements

Denali for Families: A Visitor's Guide to Denali National Park and Preserve
Denali, Alaska

Editor and Illustrator — *2018*

- **Children's book** about nature and geology for kids and families
- Guide was produced by the National Park Service and Alaska Geographic working in partnership through the Murie Science and Learning Center and published in 2020