

# ETHAN NELSON

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## Professional Experience

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### Senior Associate, Analytics

May 2022-Present

*dentsu*

*Remote*

- Use of data visualization tools to bring insight to clients.
- Aided in the setup of automated data pipelines.

### Software Engineer

May 2021-Dec 2021

*ARCTEC Solutions*

*Middleburg, VA*

- Automation of software installation tasks.
- Modification of existing code to stream data more effectively than natively designed.
- Present research findings to a team of engineers.
- Creating a data dissemination tool to pull data from APIs and remote databases to store into a local database.

### Data Science Intern

Jan 2021-April 2021

*Snow Data Science*

*Houston TX, Rexburg, ID*

- Used data visualization to create results that were easily interpreted by humans.
- Researched unsupervised machine learning algorithms pertaining to clustering and use of dimensionality reduction (PCA).

### Data Reviewer, Annotator

Feb 2020-Jan 2021

*Research & Business Development Center*

*Rexburg, ID*

- Conducted research under a Machine Learning Engineer in order to increase working knowledge on machine learning algorithms specifically dealing with neural networks, semantic segmentation and point cloud classification.
- Built neural network with Point Net and TensorFlow to classify point cloud data to help achieve a fully automated warehouse.
- Correctly applied algorithms to classify point cloud data.

## Research Projects

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**Fault Detection-** Research on predicting faults in oil pipelines. Use of unsupervised machine learning and dimension reduction to predict and then visualize groupings. Sponsored by [Snow Data Science](#).

**Image Colorization-** Predicted the colored counterpart of grayscale images. Research into different color spaces such as LAB. Applied findings to different use cases such as image compression.

**Point Cloud Classification-** Use of neural networks to predict classification of point cloud images for use in robotic warehouses. Dealt with lidar imagery.

## Technical Experience

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|----------------------|--------------------------|-----------------------------------|
| • Python 2.7, 3      | • SQL/ NoSQL             | • 3D modeling (Autodesk Inventor) |
| • Machine Learning   | • Computer vision        | • Agile/ Scrum                    |
| • Data Visualization | • Object oriented (OOP)  | • Debugging                       |
| • Tensorflow/ Keras  | • Linux (Ubuntu, RedHat) | • Networking                      |

## Education

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### Brigham Young University-Idaho

Sep 2021

*BS. Science in Computer Science*

*Rexburg, ID*

### Data Career Jumpstart

Present

*Data science project experience*

*Remote*