ETHAN NELSON

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Education\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Brigham Young University-Idaho**  Apr 2021

*BS. Science in Computer Science Rexburg, ID*

|  |  |  |
| --- | --- | --- |
| **Advanced:**   * Python/Machine Learning * C++ | **Competent:**   * Keras, TensorFlow, NumPy, Pandas * KNN, Neural Networks, Clustering, Point Cloud * Plotly, Dash | **Topics studied:**   * Machine learning and data mining * Computer security * Software engineering |

Work Experience\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Data Science Intern** Jan 2020-Present

*Snow Data Science Houston TX, Rexburg, ID*

* Using data visualization to create results that are easily understandable
* Researching unsupervised machine learning algorithms pertaining to clustering and use of PCA
* Program will work with large systems to detect and pinpoint where faults are occurring

**Data Reviewer, Annotator** Feb 2020-Present

*Research & Business Development Center Rexburg, ID*

* Conduct 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.
* Build neural network with Point Net and TensorFlow to classify point cloud data to help achieve a fully automated warehouse.
* Correctly apply algorithms to classify point cloud data.
* Contributing to 80,000+ image data set to train machine learning algorithm in recognizing product details

**Front-End Developer** Sep 2019- Feb 2020

*House Cleaning Captains Rexburg, ID*

* Built website to increase public exposure of local startup and increased exposure through use of SEO.
* Maintained and updated website to help company maintain a professional appearance as well as allow workers to view/manage appointments.

Project Experience\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Image Colorization** Nov 2019-Dec 2019

*Student Project Rexburg, ID*

* Trained a machine learning algorithm using an 800+ image database.
* Deepened knowledge on Convolutional Neural Networks and image pre-processing by experimenting and researching relevant data.
* Collaborated with team to maximize efficiency in preparing training and modeling training data to speed up result time.

**EEG Eye-State Data Research** Jan 2020-Feb 2020

*Personal Project Rexburg, ID*

* Conducted and applied research in order to understand EEG data and how it works with machine learning.
* Built and trained a network that could classify eye state data with a 94.53% accuracy.

Other Relevant \_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Amateur Radio Operator (K7INE)** March 2020 – Present

* Participate in ERC communication channel (Emergency radio communication East Idaho).

**Volunteer Representative** |*The Church of Jesus Christ of Latter-day Saints*  Feb 2016 – Feb 2018

*London, England*

* Helped others set and plan to meet goals.
* Lead 6 other volunteers- trainings, overseeing statistics, reported status metrics.

**Won nation-wide youth competition** | instructables.com Sept 2013

* Used multiple technologies to create a creative home improvement project.
* Project included designing and building a system to toggle lights from bed.
* Use of 3-D printing, Raspberry Pi, Arduino, soldering, plexiglass.