

# HARRISON STANTON

702-712-0826 | [harrisonbstanton@gmail.com](mailto:harrisonbstanton@gmail.com)

## About Me

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I am a programmer with a focus on applied machine learning. I have architected and built several machine learning solutions to novel problems. I am passionate about cutting-edge algorithms, thorough testing, high performance code, and learning.

## SKILLS

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### Programming Languages

Experienced: C, C++, Python, Matlab

Familiar: Java

### Scripting Languages

Experienced: Bash, Csh/Tcsh

Familiar: L<sup>A</sup>T<sub>E</sub>X, Javascript

### Frameworks and Tools

Experienced: PyTorch, Numpy, Gitlab(CI/CD), git, Docker/Podman

Familiar: TensorFlow, Matplotlib, QT, Boost, svn, cmake, AWS (EC2 and S3)

### Operating Systems

Experienced: Linux (Redhat, CentOS, Debian, ArchLinux, Ubuntu), Windows

## EXPERIENCE

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### Lockheed Martin, Rotary and Mission Systems, Syracuse, NY

*Software Engineer, 2021 - Current*

Implemented several different deep convolutional neural network architectures for a novel segmentation use case. Led DevSecOps initiatives on several teams.

*Software Engineer Associate, 2018 - 2020*

Implemented state of the art Reinforcement Learning Algorithms ( Soft-Actor Critic and Proximal Policy Optimization ) to solve novel problems. Worked with AWS EC2 elastic compute resources. Created and developed in docker containers with machine learning libraries.

### Computer Science Capstone Course Externship, Reno, NV

*General Electric, Reno, NV, August 2016 - May 2017*

Developed an application to classify sensor data using machine learning techniques.

Displayed the data and classification results on a web page using D3.js.

### Lab Instructor, Reno, NV

*University of Nevada, Reno, Spring 2016*

Taught two sections of the Computer Engineering 301 lab for the University of Nevada, Reno.

# PROJECTS

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## Home Server

*Personal Project, 2020 - Ongoing*

Set up a home server for usage with personal machine learning projects and mining crypto currency. Two Supermicro 4U chassis inside a 18U rack.

## AWS Hosted DnD Server

*Personal Project, 2021 - Ongoing*

Set up a AWS hosted server to virtually play DnD. Created an S3 instance to store all the required assets, and configured the roles for S3. Software is loaded via Docker.

## GLM for Machine Learning Technique Prediction

*University of Nevada, Reno, Fall 2017 - 2018*

Programmed a machine learning classifier ensemble. A large set of datasets were then trained through the ensemble and generated higher order data. This ensemble data was used to create a generalized linear model to predict accuracy of different classifiers based off of specific extracted attributes of the data set. For example, does the distribution of the dataset have an effect on what classifiers perform well?

## Machine Learning Strategies for Solving the Bongard Problems

*University of Nevada, Reno, Fall 2016*

Constructed and trained a support vector machine and a recurrent neural network classifier on a subset of the Bongard Problems.

## Smoke Detection Prescreening in Sequential Images

*University of Nevada, Reno, Spring 2015*

Contributed to a program which identified movement patterns to locate smoke in the early stages of potential forest fires. Project was selected to be presented at ISCA CATA in 2016.

# EDUCATION

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## University of Nevada, Reno, NV

*Bachelor of Science, Discrete Mathematics, December 2017*

Selected Coursework: Categorical Data Analysis, Statistical Machine Learning

*Bachelor of Science, Computer Science and Engineering, December 2017*

Selected Coursework: Advanced Computer Vision, Artificial Intelligence