Variational Autoencoders on Astronomical Catalogs

Ash Karale and Ariella Atencio

[ash.karale@drexel.edu](mailto:ash.karale@drexel.edu) [ariella.atencio@drexel.edu](mailto:ariella.atencio@drexel.edu)

Department of Physics,

Drexel University,

Philadelphia, PA

**Abstract**

*Write a short abstract combining intro and conclusion*

Keywords: ml process, autoencoder, neural networks, tensorflow, pytorch

# 

# Introduction

Similar to the draft

## Neural Networks

Explanation of Neural Networks - Deep Learning – Frameworks

1. TensorFlow vs Pytorch

Intro to TensorFlow and Pytorch – Head-to-head comparison using an example of a variational autoencoder

1. The ML Process

Explain Dataset – Doing EDA – Defining VaDE – Running – Output

1. Conclusion.

Summary of neural networks – pytorch & tensorflow – results of VaDE

References

Last Name, F. M. (Year). Article Title. *Journal Title*, Pages From - To.

Last Name, F. M. (Year). *Book Title.* City Name: Publisher Name.