

ML PROJECT TASK 1 REPORT
University of Florida
Computer & Information Science Engineering

Project - Task 1 Report
GAN and VAE for Handwriting Recognition

1 Data Procurement:

- **MINST:** <http://yann.lecun.com/exdb/mnist/>
- **Devnagri Character Dataset:** http://www.iapr-tc11.org/mediawiki/index.php?title=Devanagari_Character_Dataset *[If time permits]*

2 Development Technologies:

- **Programming Language:** Python3.5
- **Platform:** The code will be developed as a Github project with automated documentation using pydoc.
- **Packages:** NumPy and Pandas will be used for data-handling. For machine learning Keras+TensorFlow and PyTorch will be used, so as to make comparison between the two packages in terms of performance, computational speed and ease of writing code [Intended to be a learning exercise of both the packages]. Dash and Plotly to create the final dash board to present results.

3 Computational Resources:

- **Personal Laptop:** 64bit 16GB 8×1.80GHz Windows 10 Machine
- **Lab Desktop:** 64bit 8GB 8×1.80GHz Linux [Ubuntu 18.04.2 LTS] Machine
- **HiPerGator:** *[If time permits]*