Homework 00 – Introduction

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0 Outline

1 Reading
2 Theory
3 Practice

1 Reading

1. Introduction
   Motivation: get a big picture view of the course
   https://github.com/arthurredfern/UT-Dallas-CS-6301-CNNs/blob/master/Lectures/xNNs_000_Introduction.pdf

   Complete

2. Implementation Backup – Example Software section on Google's xNN software
   Motivation: get a big picture view of Google's xNN software ecosystem
   https://github.com/arthurredfern/UT-Dallas-CS-6301-CNNs/blob/master/Lectures/xNNs_070_Implementation.pdf

   Complete

3. A recipe for training neural networks
   Motivation: effectively a reminder that good software development practices also apply to writing code for designing and training xNNs
   http://karpathy.github.io/2019/04/25/recipe/

   Complete

2 Theory

None

3 Practice

4. For compute resources this class will use Google Colaboratory, a cloud based Jupyter notebook environment provided by Google (https://colab.research.google.com/notebooks/welcome.ipynb). Go through the following examples on the Google Colab welcome page to familiarize yourself with this environment:

- Introductory Colaboratory
- Getting Started
- More Resources
    - Working with Notebooks in Colaboratory
    - Working with Data

Complete

5. For a high level language, this class will use Python and the NumPy and Matplotlib packages. If you are not already familiar with these, study the following tutorial:
http://cs231n.github.io/python-numpy-tutorial/

If you would like more information on any of these, the following are some pointers to additional references:

- Python: https://developers.google.com/edu/python/
- Python: https://docs.python.org/3/tutorial/
- NumPy: https://docs.scipy.org/doc/numpy/user/quickstart.html
- Matplotlib: https://matplotlib.org/users/pyplot_tutorial.html

Complete