

Homework 00 – Introduction

Arthur J. Redfern
arthur.redfern@utdallas.edu

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 (Google software section slides 182 – 223)

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