Introduction to
TensorFlow

Frameworks

- TensorFlow (Google)

- CNTK (Microsoft)

- PyTorch (Facebook)

- Caffe (Berkeley)

- Caffe2 (Facebook)

- Theano (Montreal)

TensorFlow

- Popular ML library from Google

- Tensor:

- Flow:

Keras

- High-level API

- Easy and fast prototyping

- Backends: TF, CNTK and Theano

Python

- Works well with Keras + Tensorflow

- Quick and easy prototyping

- Fast enough (heavy lifting is done by TF anyway)

Libraries

- pandas

- matplotlib

- seaborn

- sklearn

- opencv

- nltk

Advice

- All frameworks have their own pros and cons

- If you have a good reason to use something, use it

- Otherwise, use Python with Keras and TensorFlow

Examples

- <u>Keras with TensorFlow (Python)</u>

- <u>Keras with TensorFlow (R)</u>

- <u>TensorBoard</u>