GPU Instructions

This project requires GPU acceleration to run efficiently. Please refer to the instructions below to complete the project.

**Option 1: Udacity Workspaces with GPU Support (Highly Recommended)**

Open the **[NLP Machine Translation Workspace](https://classroom.udacity.com/nanodegrees/nd889/parts/12b799db-34b6-4d3d-8aa3-89b1eef33b0e/modules/73ae36ce-2246-42f1-a52c-7513af57b71d/lessons/a682ebad-880b-42c9-b39b-8aef2136298a/concepts/b7226898-22d9-46ea-bafc-28f166c632ea" \t "_blank)** lesson and complete the project.

**Option 2: AWS EC2 (Recommended - but more difficult than Workspaces)**

1. Follow the **[Udacity instructions](https://classroom.udacity.com/nanodegrees/nd889/parts/16cf5df5-73f0-4afa-93a9-de5974257236/modules/3511c7a0-6792-416f-89e6-a677f0770380/lessons/acd7408c-556a-493f-9a5f-c408177d40d4/concepts/b7bc490f-065d-4b4f-b65a-e1cdf1c55d33" \t "_blank)** to launch an EC2 GPU instance . **All of the remaining instructions should be executed in the EC2 instance.**
2. Clone the project GitHub repository, and navigate to the downloaded folder:

git clone https://github.com/udacity/aind2-nlp-capstone cd aind2-nlp-capstone

1. Start Jupyter: jupyter notebook --ip=0.0.0.0 --no-browser
2. Look at the output in the window, and find the line that looks like the following:

Copy/paste this URL into your browser when you connect for the first time to login with a token: http://0.0.0.0:8888/?token=3156e...

1. Copy and paste the **complete URL** into the address bar of a web browser (Firefox, Safari, Chrome, etc). Before navigating to the URL, replace 0.0.0.0 in the URL with the "IPv4 Public IP" address from the EC2 Dashboard. Press Enter.
2. Click on **machine\_translation.ipynb**. Follow the instructions in the notebook.

**Option 3: Running on your Local Machine (NOT Recommended)**

1. Clone the repository, and navigate to the downloaded folder.

git clone https://github.com/udacity/aind2-nlp-capstone cd aind2-nlp-capstone

1. Create (and activate) a new environment with Python 3.5 and the numpy package.

conda create --name aind-nlp-capstone python=3.5 numpy source activate aind-nlp-capstone

1. Install/Update TensorFlow.

pip install tensorflow==1.1 -U

1. Install/Update Keras.

pip install keras -U

1. Switch **[Keras backend](https://keras.io/backend/" \t "_blank)** to TensorFlow.

KERAS\_BACKEND=tensorflow python -c "from keras import backend"

1. Start Jupyter: jupyter notebook --no-browser
2. Look at the output in the window, and find the line that looks like the following:

Copy/paste this URL into your browser when you connect for the first time to login with a token: <http://0.0.0.0:8888/?token=3156e>...

1. Copy and paste the **complete URL** into the address bar of a web browser (Firefox, Safari, Chrome, etc). Press Enter.
2. Click on **machine\_translation.ipynb**. Follow the instructions in the notebook.