Artificial Intelligence: Modeling Human Intelligence with Networks

Jeová Farias Sales Rocha Neto jeova_farias@brown.edu

Neural Networks, Game Changer Of Artificial Intelligence

Premise and Goal

■ We will just do simple neural networks here, but there are much cooler one out there!

Premise and Goal

- We will just do simple neural networks here, but there are much cooler one out there!
- The goal of this project is to research a more advanced neural and present your findings to the class.

Premise and Goal

- We will just do simple neural networks here, but there are much cooler one out there!
- The goal of this project is to research a more advanced neural and present your findings to the class.

What you should do

• Choose a problem that *Deep Learning* has found a solution to.

Premise and Goal

- We will just do simple neural networks here, but there are much cooler one out there!
- The goal of this project is to research a more advanced neural and present your findings to the class.

What you should do

- Choose a problem that *Deep Learning* has found a solution to.
- 2 Provide a basic understanding of the solution:

Premise and Goal

- We will just do simple neural networks here, but there are much cooler one out there!
- The goal of this project is to research a more advanced neural and present your findings to the class.

What you should do

- Choose a problem that *Deep Learning* has found a solution to.
- **②** Provide a basic understanding of the solution:
 - ▶ What problem does the network solve? Why is it challenging?
 - ▶ When was this network first created? By whom?
 - How the network works? Do they train it on a the dataset? Which one?
 - How do you think that this network and its applications will evolve over time?

Topics

- You should choose a topic among the following:
 - ▶ Convolutional neural network (CNN or RCNN):
 - Image understanding.
 - Object detection and classification.
 - Style Transfer.
 - DeepDream.
 - ▶ Recurrent neural network:
 - Natural language processing.
 - Music composition.
 - ▶ Generative adversarial network (GANS):
 - Images of people (i.e. http://thispersondoesnotexist.com).
 - Music generation.
 - Text generation (i.e. movie script, book)
 - ▶ DeepArt.
- Topic suggestions? Check http://yaronhadad.com/ deep-learning-most-amazing-applications.
- I can help you choose/understand a topic/idea!

Final Thoughts

```
Team 1: Ahmad, Allison Y., Allison Z..
Team 2: Aprille, Arthur, Aryan.
Team 3: Badr, Camellia, Connor.
Team 4: Domenic, Iris, Josefine.
Team 5: Justin, Kabeera, Olivia.
Team 6: Parth, Ray, Roshni.
Team 7: Sarah, Sean, Sophia, Zitao.
```