

**Artificial Intelligence** 

A Machine Learning & Deep Learning Chat Bot Created by Afaq Anwar

# What is it?

 Monday is a Machine Learning chatbot infused with the conventional rule based chatbot in order to provide a unique "artificial intelligence". It was planned to be a general intelligence capable of many tasks.

 Currently there are two versions, Monday is the one deployed in production, while Rennon is the Deep Learning, more advanced chatbot.

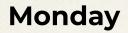
Here's how each works. NOTE - Both chatbots have some rules that add extra features!

Monday - Uses clustering and linear equations to classify questions with responses, learns as you go along.

**Rennon** - Encodes each user input to a mathematical value 0 - 1, runs it through the Neural Network producing an output which is then decoded.

## **TECHNOLOGY STACKS**

# Rennon





Python Version 3.6.X



Python Version 3.6.X



cuDNN
Tensorflow 1.4 +
Nvidia CUDA Accelerated



Various API(s)

More information within README.MD





Keras



Django Web Framework



Django Web Framework

Visit This website to talk to Monday.

http://www.afaganwar.io

# **Development Process**

#### Rennon

- Gathered data to feed into a Neural Network (Reddit Comments [Top Post / Top Reply])
- 2. Trained TWO Neural Networks, one on 1 month of data, another on 8 months of data until learning rate halted. *(Modified Google NMT Translator)*
- 3. Developed a simple Discord Bot to interface with the Neural Network.

### Monday

- 1. Integrate Chatterbot with Django Requests
- 2. Connect Chatterbot to SQLITE DB to store user input / bot output.
- 3. Deploy to a web server.

#### SYNONYMOUS DEVELOPMENT

- 1. Develop a Django Project in order to interface POST / GET Requests with a Python Script.
- 2. Implemented AJAX Requests for JSON passthrough.
- 3. Design and Develop a clean User Interface.

### **Concepts and Technical Abilities**

### Concepts

- Deep Learning is extremely powerful, and is the cutting edge technology of the future.
- Rule Based Chatbots are extremely more powerful than Deep Learning / Machine Learning ones with the current open source libraries / technologies.

### **Technologies**

- Machine Learning / Deep Learning Theory
- Tensorflow & Scikit learn libraries
- Python Programming
- Django Web Development
- Jquery
- AJAX

#### **Skills**

- Writing production level code
- Maintaining & Documenting a GitHub repository
- Deployment of Applications

# **Finally**

Repositories related to the development of Monday / Rennon.

https://github.com/AfaqAnwar/Monday

https://github.com/AfaqAnwar/Rennon

https://github.com/AfaqAnwar/Machine-Learning-Basics

https://github.com/AfaqAnwar/Python-Applications