

# Artificial Genius: Testing the Abilities of Artificial Intelligence in a More Turing Way

Ipek, Batuhan (School: Erzincan Fen Lisesi)

In 1950 Alan Turing designed a test with the goal of finding an answer to the question "Can Machines Think?" In Turing test there is a human and a machine that is judged by another human according to their communication skills through a keyboard. The judge's goal is to determine which one of them is machine and which one of them is human by asking questions. And according to Turing if the machine can trick the judge into thinking that it is the human, that means the machine can think. In Natural Language Processing there has been a lot of research in this area in recent years. And many NLP models has been developed. The successes of these models are determined by their accuracy on datasets. So, with our project, we propose a different, more Turing like evaluation specifically for question answering models. Therefore, the goal of my projects is to find an answer to the question: can AI pretend to be human and trick other humans into that AI is actually a human? To achieve that goal, I made an experiment to be carried out in a forum site. Thus, an Artificial Intelligence program has been developed. The goal of this program is to write answers to the questions and the comments people post on social media. This program is written in Python and It is based on an NLP model that is fine-tuned version of OpenAI's GPT-2-small model. A dataset is prepared from scratch with the questions and the answers on the Internet that are previously written by people. After that GPT-2 is trained on this dataset for fine-tuning. After the training, the fine-tuned GPT-2 is connected to a forum site account as a bot with forum sites API and started making comments. After analyzing the comments made by the bot, It is clearly seen that this bot was totally successful in its mission.