Level 1 Eliza

1. Research the “ELIZA Computer Therapist Program”. Summarize your answers to the following:

a. What does the program do?

Eliza simulated conversation by using a pattern matching and substitution method that gave users an illusion of understanding on the part of the program, but had no built in framework for contextualizing events.

b. When and why was the program created?

ELIZA’s creator, Weizenbaum regarded the program as a method to show the superficiality of communication between man and machine. It was created from 1964 to 1966 at the MIT Artificial Intelligence Laboratory by Joseph Weizenbaum.

c. How does the program work?

The data and instructions were supplied by the DOCTOR script. ELIZA itself examined the text for keywords, applied values to said keywords, and transformed the input into an output. Then the script that ELIZA ran determined the keywords, set the values of keywords, and set the rules of transformation for the output.

2. Use an online version of the ELIZA program to see what it is like.

a. Open the URL :<http://psych.fullerton.edu/mbirnbaum/psych101/Eliza.htm>

b. Begin by talking about your feelings (just like if you were talking to a guidance counselor).

c. After a while, try to trick the program.

3. In what ways did the program seem like you were talking to a real person? What was a strategy used by the program to keep the discussion going?

It seemed to work best when the conversation was directed towards me. This was proven correct because the program really seemed to be a real person because of the fluency of the questions being asked. The strategy being used to keep the discussion going was that Eliza simulated conversation by using a 'pattern matching' and substitution methodology that gave users an illusion of understanding on the part of the program, but had no built in framework for contextualizing events.

4. In what ways could you tell that it was not a real person? What were some of the weaknesses of the program?

I could tell that this was indeed a computer program and not a real person when the output was very weird English because of the poor grammar and the fact that the sentence made no sense. It also seemed that the program had just repeated what I wrote. From what I figured out, I main weaknesses of the program were shown when the user didn’t input think that were not related to them. An example would be talking to Eliza about herself. Another main weakness would be talking about a general world topic such as politics or just day-to-day things.

5. If you had your friend talk to ELIZA but did not tell them it was a program, how long do you think it would take for them to figure it out? Explain your answer.

If I had a friend talk to ELIZA, I don’t think it would take them very long to figure out that this was just a computer program. If I had to guess, it would probably be from about 2-5 minutes. This would be the case because ELIZA has a tendency to give away the fact that it is a computer program when the input from the user is off-topic.

Citations:

<https://en.wikipedia.org/wiki/ELIZA>

Level 2 Turing Test

1. Research the “Turing Test”. Summarize your answers to the following:

a. What is the Turing Test?

It was a test of a machine's ability to exhibit intelligent behaviour equivalent to, or indistinguishable from, that of a human.

b. Who was Alan Turing?

Alan Turing was a British scientist and a pioneer in computer science. During World War II, he developed a machine that helped break the German Enigma code. He also laid the groundwork for modern computing and theorized about artificial intelligence.

c. How does the Turing Test work?

Turing proposed that a human evaluator would judge natural language conversations between a human and a machine designed to generate human-like responses. The evaluator would be aware that one of the two partners in conversation is a machine, and all participants would be separated from one another. The conversation would be limited to a text-only channel such as a computer keyboard and screen so the result would not depend on the machine's ability to render words as speech. If the evaluator cannot reliably tell the machine from the human, the machine is said to have passed the test. The test results do not depend on the machine's ability to give correct answers to questions, only how closely its answers resemble those a human would give.

d. How is the Turing Test different from other Artificial Intelligence tests?

The Turing test is different from other AI tests because it does not directly test whether the computer behaves intelligently. It tests only whether the computer behaves like a human being.

2. Visit the Ted Ed website to learn more about the Turing Test.

a. Watch the video at:<https://ed.ted.com/lessons/the-turing-test-can-a-computer-pass-for-a-human-alex-gendler>

b. Complete the online test at:<https://ed.ted.com/lessons/the-turing-test-can-a-computer-pass-for-a-human-alex-gendler#review>

3. Has any computer AI passed the Turing Test? Research this question and report on your results.

While there have been two well-known computer programs or chatbots, claiming to have passed the Turing Test, the reality is that no AI has been able to pass it since it was introduced. Turing, himself, thought that by the year 2000 computer systems would be able to pass the test with flying colors. This was not the case until a computer AI passes Turing test in 'world first'. A computer program called Eugene Goostman, which simulates a 13-year-old Ukrainian boy, is said to have passed the Turing test at an event organised by the University of Reading. This was the case because the computer program had a language barrier and made up for it by having humor in conversation. It had fooled 33% of the judges at the event therefore reaching the threshold of 30% of judges fooled within 5 minutes set by Alan Turing.

4. Do you think that you have ever been fooled by an on-line computer AI program? Explain your answer.

Yes, I have been fooled by an online AI program before because I may not have known that I had just talked to an AI program. This means that I thought someone had just messaged me but it was actually a bot that I had talked to. Another example is when I ask a question on my website and there is a response. I used to think that it was a human before, but now, I feel that the response was actually by a dot.

Citations:

<https://www.livescience.com/29483-alan-turing.html>

<https://en.wikipedia.org/wiki/Turing_test#Imitation_game>

<https://www.knowmail.me/blog/whats-turing-test-ai-pass/>

<https://www.bbc.com/news/technology-27762088>

Level 3 Article reviews

Pick any one out of the following two (2) “Social Media Bot” articles to read and review. Answer the questions that are specific to each article.

Article 1: Social Media Bots

Read the following article:

<https://www.questia.com/magazine/1G1-530914703/social-media-bots-how-they-spread-misinformation>

1. How much internet traffic is estimated to be produced by AI bots?

It is estimated by the Imperva Incapsula security company’s Bot Traffic Report 2016 that approximately 30% of internet traffic is produced by bots.

2. What are some strategies used by bots to appear more human?

Some “social bots” were developed to behave like a human by using emojis in their posts. They can only post at reasonable hours of the day, or they are limiting the amount of information they share. They have become increasingly complex which makes it difficult to distinguish a bot-generated internet account from a live human account.

3. How many social media accounts are estimated to be AI bots?

There was an estimate in 2014 by Twitter in a Securities and Exchange Commission filing that around 8.5% of all its users were bots. Now, they stated that number may have increased to as much as 15% in 2017.

4. How easy is it for a user to detect that they have been “friended” buy a social media AI bot?

It is actually very difficult now for a user to detect whether they have an actual person requesting a friend request or if it is just a bot. In fact, people who are unaware that they are interacting with a bot can easily be supplied with false information. According to the Communications of the Association for Computing Machinery in 2016, more than 20% of human Facebook users accepted friend requests indiscriminately. This was more occuring for people with a large network of friends because they are more likely to accept requests from people they don't know. This can make it relatively easy for bots to infiltrate a network of social media users.

Article 2: Social Media Bots

Read the following article:

<https://www.usnews.com/news/healthiest-communities/articles/2018-07-24/how-social-media-bots-could-compromise-public-health>

1. How many social media accounts are estimated to be AI bots?

2. What is the purpose / objective of these AI bots?

3. How could a bot be used to increase the number of people vaping or smoking?

4. How could a bot be used to increase the public concern about getting vaccinated?

5. What is a “sockpuppet”?

Pick any one out of the following two (2) “Automated Journalism” articles to read and review. Answer the questions that are specific to each article.

Article 3: Automated Journalism

Read the following article:

<https://www.bbc.com/news/business-42858174>

1. What are some of the topics of the articles produced by the robo-journalists owned by the Press Association (PA)? How long and how detailed are these articles?

2. “At this stage” what are the limitations of robo-journalists? What jobs do human journalists do that cannot yet be done by robo-journalists?

3. What happened when the LA Times used a robot-journalist to report on an earthquake?

4. What are some of the “easier” tasks that robo-journalists are used to produce articles for?

5. Do you think this article was written by a robo-journalist? Explain your answer by giving examples of both why and why not.

Article 4: Automated Journalism

Read the following article:

<https://digiday.com/media/washington-posts-robot-reporter-published-500-articles-last-year/>

1. What is the name of the Washington Post’s robo-journalist and what was its first assignment?

The Washington Post has its own robot-journalist called Heliograf, and it was first used to spit out around 300 short reports and alerts on the Rio Olympics.

2. How can robo-reporting expand the audience for newspapers?

This can help expand the audience for newspapers because so many more stories can be written quickly, building a stronger base of supporters. In its first year, the Post produced around 850 articles using Heliograf and that included 500 articles around the election that generated more than 500,000 clicks. Even though that may not seem like a lot, most of these stories weren’t going to be dedicated to staff anyway. For example, in the 2012 election, the Post generated just 15 percent of what it generated in the 2016 election.

3. How can robo-reporting help human journalists?

Media outlets using AI say it’s meant to enable journalists to do more high-value work. AI freed up 20 percent of reporters time spent covering corporate earnings and that AI is very accurate. The error rate in the copy decreased even as the volume of the output increased more than ten times. During the election, the Post used Heliograf to alert the newsroom when election results started trending in an unexpected direction, giving reporters time to thoroughly cover the news. AI can spot trends in financial and other big data sets. AI can be deployed to update ongoing stories like weather events very quickly.

4. Are smaller news organizations using robo-reporting? What are the benefits to smaller organizations?

Yes, a lot of smaller news organizations or smaller organizations are that they don’t need to pay someone to write and sell a lot of their stories. Another benefit is that there will be a lot less human effort into writing these reports. They can expect the robot to know trending stories and then writing a unique report itself. For smaller organizations, there will be a reduced risk for mistakes and this is particularly useful for smaller organizations because they will likely not have a specific editor.

5. Do you think this article was written by a robo-reporter? Explain your answer by giving examples of both why and why not.

I do believe this article was written by a robot-reporter because I feel that this article is something that the post would not dedicate to a news reporter. It is something smaller and that is exactly the job of a robot-reporter, to report and write about a lot of small stories. Another benefit could be that the articles could be posted any time of the day.

Level 4 Will Artificial Intelligence Take My Job (SOP)

To prepare for the final summative you should reflect on how artificial intelligence may impact the future job market. (i.e. The jobs and careers that will be available when you graduate.)

Write two Supported Opinion Paragraphs for two job topics as follows:

1. Select two topics from the list of jobs below. If you have an idea for another job please clear it with Mr. Nestor before your proceed.

2. Write a Supported Opinion Paragraph for each job topic

a. The question to be answered is “Will Artificial Intelligence Take My Job”

b. Some themes to consider are:

i. Describe your job as it currently exists (or as it is traditionally). Focus on details that could be automated.

ii. Provide some examples of how your job can be (or has been) changed by computer technology in general.

iii. Provide some examples of how your job can be (or has been) changed by artificial intelligence specifically.

iv. Describe your job as it will exist in the future as it changes due to computer technology.

v. What education will be required to do this job more effectively

3. Read the following articles to get some ideas about what you should include in your SOP.

<https://www.forbes.com/sites/forbestechcouncil/2018/02/26/artificial-intelligence-will-take-your-job-what-you-can-do-today-to-protect-it-tomorrow/#430f57bf4f27>

<https://www.forbes.com/sites/theyec/2018/07/06/do-you-fear-artificial-intelligence-will-take-your-job/#7fb127a611aa>

4. Guidelines for writing a supported opinion paragraph (SOP)

· <http://schools.peelschools.org/sec/fletchersmeadow/studentlife/OSSLTprep/Documents/Sample_%20Writing%20a%20Supported%20opinion%20paragraph.pdf>

Truck Driver:

Truck Driver is a job which involves driving a truck for very long periods of time. The purpose of it is to deliver loads and packages to different destinations which could be national or international. It is a high paying job because it is very tiring to do this job and the value of delivering goods is very high as well. This job has been changed by computer technology because there are new GPS technologies as well as smart trucking routes set up by new computer technologies. This job will be changed by artificial intelligence because there will be driverless trucks or there will be very smart AI implemented into the trucks. Some examples of this are driverless truck released by Tesla as well as traffic sensors for safety invented by other companies. The job of a truck driver will be taken by an AI. This job of being a truck driver will be very different in the future because new emerging and innovative computer technologies will have changed it very drastically. Some significant changes will be that there will be no need of a driver because the truck will be driven by AI that is implemented into it. Some benefits of this are that the truck will deliver faster because the AI will never get tired like a human would. Some other benefits would be that there would be fewer accidents with the AI because it would not get distracted like a human might. Since no one will be driving the truck, a lot of computer and AI knowledge will be required to design, build, and potentially repair and upgrade the AI as well as the truck. In order for this, some education such as a degree in computer science, computer engineering, or computer programing is usually required. In conclusion, AI will drastically change the trucking industry but even though it may take away jobs, a lot more new job opportunities will be created.

Taxi Driver:

Taxi Driver is a job which involves using a car leased by a cab company or by using their own cars for a company and then to pick up passengers from a specific location and quickly and safely deliver them to their desired location. This job has good pay but it is very difficult because the driver must pay attention all day and they must deal with different types of passengers. This job has been changed by computer technology because there are new GPS technologies which means the driver can search for a location and go there rather than having to memorize all of the roads and streets. Some other changes by computer technologies are automatic calls and online payments by the customers. This job will be changed by artificial intelligence because there will be driverless taxi cars, with no need for the driver. This will happen because there will be very smart and complex AI implemented into the taxi. Some benefits of this would be that the taxi could automatically pick the fastest route to and from the passengers location, therefore saving a lot of time. The taxi will also not have to take a break which will mean that more customers can access taxis. There is also an important safety improvement because the taxi will get into fewer accidents because it will not get tired and lose control or it will not get distracted like a human might. The other safety improvement is that the AI could not be dangerous to the passengers like humans have been in some past cases. The job of a taxi driver will be taken by AI. Some significant changes will be that there will be no need of a driver because the taxi will be driven by AI that is implemented into it. Since no one will be driving the truck, a lot of computer and AI knowledge will be required to design, build, and potentially repair and upgrade the AI as well as the taxi. In order for this, some education such as a degree in computer science, computer engineering, or computer programing is usually required. In conclusion, AI will drastically change the taxi industry but even though it may take away jobs, a lot more new job opportunities will be created.

Job Topic Suggestions:

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| --- | --- | --- |
| Truck Driver | Taxi Driver | Delivery Person |
| Store Checkout Clerk | Restaurant Cook / Waiter | Retail Salesperson |
| Real Estate Agent | Financial Advisor | Bank Teller |
| Family Doctor | Medical Specialist / Surgeon | Fitness Instructor |
| Artist | TV / Radio Personality | Actor |
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