



COMS 493

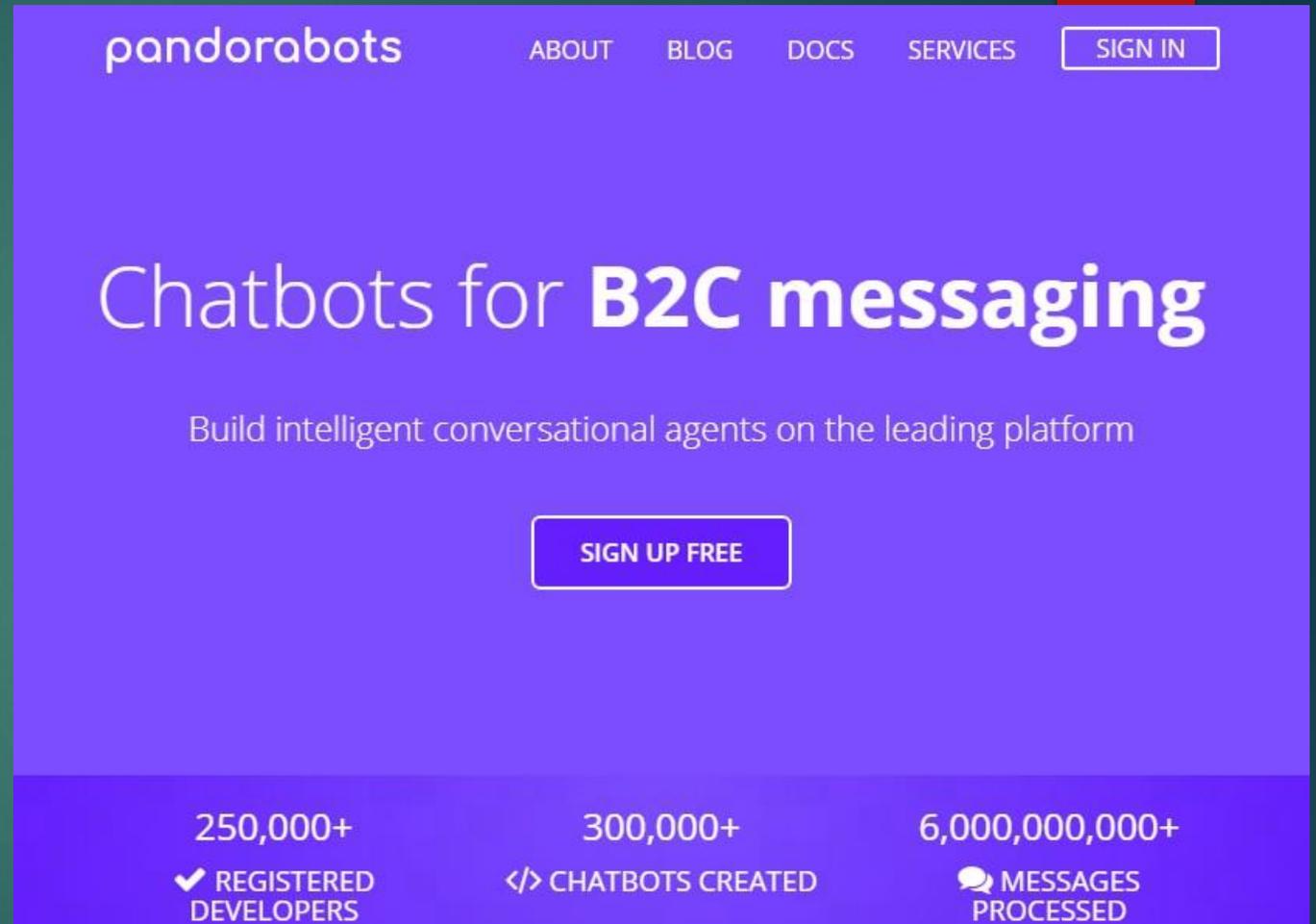
AI, ROBOTS & COMMUNICATION

Agenda

- ▶ Review
- ▶ Computational Creativity
- ▶ Preview

Review

- ▶ Chatbots
 - ▶ Origin/History
 - ▶ Critical Questions



The screenshot shows the Pandorabots website homepage. The header is purple with the 'pandorabots' logo on the left and navigation links for 'ABOUT', 'BLOG', 'DOCS', 'SERVICES', and a 'SIGN IN' button on the right. The main content area is a light purple gradient with the headline 'Chatbots for **B2C messaging**' and the subtext 'Build intelligent conversational agents on the leading platform'. A 'SIGN UP FREE' button is centered below the text. The footer is a darker purple and features three statistics: '250,000+ REGISTERED DEVELOPERS', '300,000+ </> CHATBOTS CREATED', and '6,000,000,000+ MESSAGES PROCESSED'.

pandorabots ABOUT BLOG DOCS SERVICES SIGN IN

Chatbots for **B2C messaging**

Build intelligent conversational agents on the leading platform

SIGN UP FREE

250,000+
✓ REGISTERED DEVELOPERS

300,000+
</> CHATBOTS CREATED

6,000,000,000+
💬 MESSAGES PROCESSED

Review

Origins/History

Change the Question - Imitation Game

“Instead of attempting such a definition, I shall replace the question by another, which is closely related to it and is expressed in relatively unambiguous words. The new form of the problem can be described in terms of a game which we call the ‘imitation game.’ It is played with three people, a man (A), a woman (B), and an interrogator (C) who may be of either sex. The interrogator stays in a room apart from the other two. The object of the game for the interrogator is to determine which of the other two is the man and which is the woman..” – Alan Turing, 1950

A. M. Turing (1950) *Computing Machinery and Intelligence*. *Mind* 49: 433-460.

COMPUTING MACHINERY AND INTELLIGENCE

By A. M. Turing

1. The Imitation Game

“Can machines think?” This should begin with “What do you mean by ‘think?’” and “think.” The definitions might be verbal, but this attitude is verbal use of the words, but this attitude is verbal. The definitions of “think” and “think” are to be found by a method which is difficult to escape the conclusion that the question “Can machines think?” is to be sought in a different form. Instead of attempting such a definition, I shall replace the question by another which is closely related to it and is

expressed in terms of a game which we call the Imitation Game. It is played with three people, a man (A), a woman (B), and an interrogator (C) who may be of either sex. The interrogator stays in a room apart from the other two. The object of the game for the interrogator is to determine which of the other two is the man and which is the woman. The interrogator puts to both A and B a series of questions to which they must answer. The interrogator asks them by labels X and Y, and at the end of the game he says either “X is A and Y is B” or “X is B and Y is A.” The object of the game for the players is to help the interrogator. The object of the game for the interrogator is to determine which of the other two is the man and which is the woman. The game thus:

is played as follows:

1. It is A's object in the game to try and answer the questions in such a way that the interrogator will never be able to tell which is the man and which is the woman. The object of the game for the interrogator is to determine which of the other two is the man and which is the woman. The game thus:

is played as follows:

2. The interrogator asks the questions and the answers should be written, and the interrogator is to have a teleprinter communicating with the players. The object of the game for the interrogator is to determine which of the other two is the man and which is the woman. The game thus:

is played as follows:

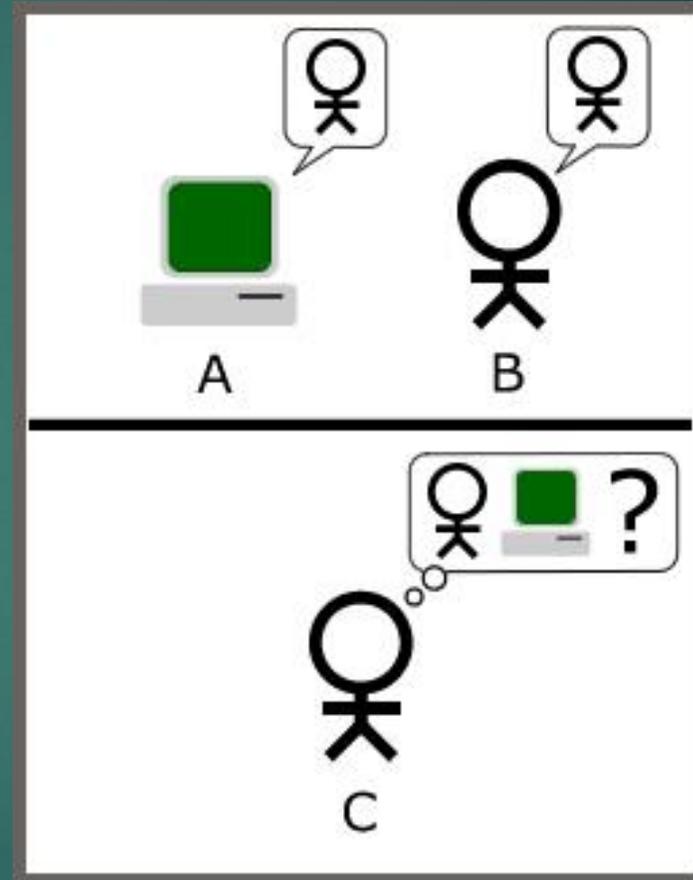
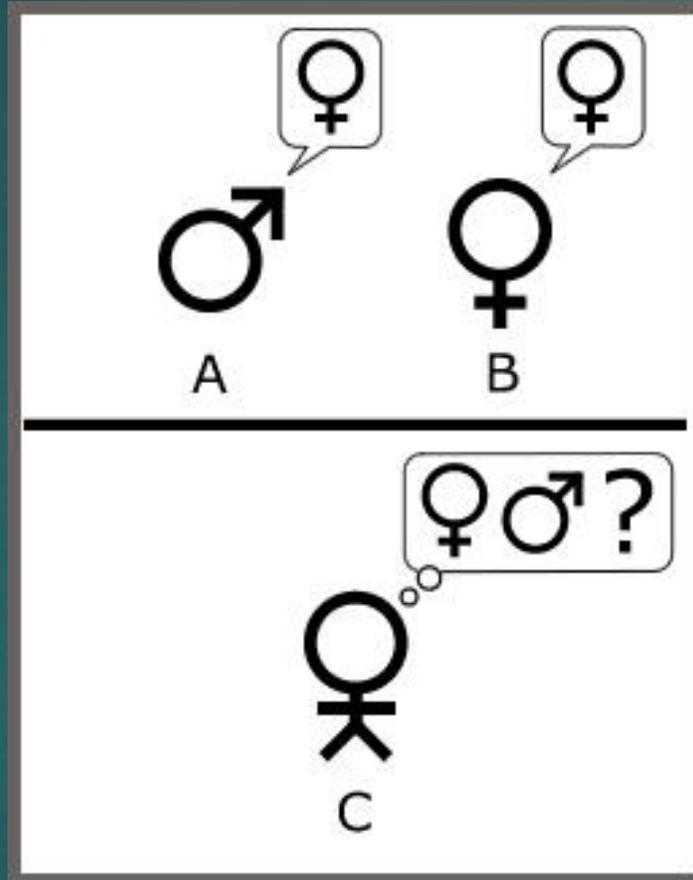
“I am the woman, don't listen to him!” to her answers, but it will avail nothing as the man can make similar remarks.

We now ask the question, “What will happen when a machine takes the part of A in this game?” Will the interrogator decide wrongly as often when the game is played like this as he does when the game is played between a man and a woman? These questions replace our original, “Can machines think?”

Review

Origins/History

The Imitation Game



Review

Origins/History

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=====
EEEEEEEE L      IIIIIII ZZZZZZZ      AAA
E         L      I      Z          A   A
E         L      I      Z          A   A
EEEEEE   L      I      Z          A   A
E         L      I      Z          A   A
E         L      I      Z          A   A
EEEEEEEE LLLLLLLL IIIIIII ZZZZZZZ      A   A
=====
ELIZA > (PLEASE TYPE IN ALL CAPS) WHAT'S YOUR NAME DEAR ?
AMIT
ELIZA > HI, I'M ELIZA. WHAT DO YOU WANT TO TALK ABOUT ?
AMIT > CAN I TALK ABOUT MY PROBLEM ?
ELIZA > SURE... !
AMIT > DUE TO ON GOING EXAMS IN COLLEGE, I HAVE A LOT OF STRESS.
ELIZA > PLEASE RELAX A LITTLE. SLEEP WELL.
AMIT > THANKS FOR YOUR ADVICE.
ELIZA > NO MENTION.
AMIT > BYE
ELIZA > BYE AND KEEP IN TOUCH...
=====

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Joseph Weizenbaum - 1966

Computational Linguistics

D. G. BOBROW, Editor

Contextual Understanding by

Further, what I wish to report here should not be confused with what is generally called content analysis. In the present situation we are concerned with the fragments of natural language that occur in conversations, not with complete texts. Consequently, we cannot rely on the texts being analyzed to be grammatically complete or correct. No theory that depends on parsing of presumably unfragmented sentences can be of much help. We must depend on heuristics and other such impure devices instead. The first program to which I wish to call attention is a particular member of a family of programs which has come to be known as DOCTOR. The family name of these programs is ELIZA. This name was chosen because ELIZA programs, like the Eliza of Pygmalion fame, can be taught to speak increasingly well. DOCTOR causes a human to respond roughly as would certain psychotherapists (Rogerians). ELIZA performs best when its human respondent is initially instructed to "talk" to it, via a typewriter, of course, just as one would to a psychiatrist.

I chose this mode of conversation because the psychiatric interview is one of the few examples of categorized dyadic natural language communication in which one of the participating pair is free to assume the pose of knowing nothing of the real world. If, for example, one were to tell a psychiatrist "I went for a boat ride" and he responded "Tell me about boats," one would not assume that he knew nothing about boats, but that he had some interest in so directing the subsequent conversation. It is important to note that this assumption is one made by the speaker. Whether it is realistic or not is an altogether separate question. In any case, it has a crucial psychological utility in that it serves the speaker to maintain his sense of being heard and understood. The speaker thus defends his impression (which even in real life may be illusory) by attributing to his conversational partner certain bits of background knowledge, insights and reasoning. But again, these are the speaker's contribution to the conversation. They manifest themselves inferentially in the interpretations he makes of the offered responses. From

many ideas that potentially aid understanding are communicated by gestures, intonations, pauses, and so on. All of these are unavailable to readers of telegrams—be they computers or humans.

Work reported herein was supported (in part) by Project MAC, an MIT research program sponsored by the Advanced Research Projects Agency, Department of Defense, under Office of Naval Research Contract Number Nonr-4102(01).

the purely technical programming point of view, the psychiatric interview has the advantage that it eliminates the need for storing explicit information about the real world.

The human speaker will contribute much to clothe ELIZA's responses in vestments of plausibility. However, he will not defend his illusion (that he is being understood) against all odds. In human conversation a speaker will

Review

Origins/History

Men are all alike
IN WHAT WAY

They're always bugging us about something or other
CAN YOU THINK OF A SPECIFIC EXAMPLE

Well, my boyfriend made me come here.

YOUR BOYFRIEND MADE YOU COME HERE

He says I'm depressed much of the time.

I AM SORRY TO HEAR YOU ARE DEPRESSED

It's true. I am unhappy.

DO YOU THINK COMING HERE WILL HELP YOU NOT TO

I need some help, that much seems certain.

WHAT WOULD IT MEAN TO YOU IF YOU GOT SOME HELP

Perhaps I could learn to get along with my mother.

TELL ME MORE ABOUT YOUR FAMILY

My mother takes care of me.

WHO ELSE IN YOUR FAMILY TAKES CARE OF YOU

My father

YOUR FATHER. WHAT RESEMBLANCE DO YOU SEE

You are not very aggressive but I think you don't want me to notice

WHAT MAKES YOU THINK I AM NOT VERY AGGRESSIVE

You don't argue with me.

WHY DO YOU THINK I DON'T ARGUE WITH YOU

You are afraid of me.

DOES IT PLEASE YOU TO BELIEVE I AM AFRAID OF YOU

My father is afraid of everybody.

WHAT ELSE COMES TO MIND WHEN YOU THINK OF YOUR

Bullies

DOES THAT HAVE ANYTHING TO DO WITH THE FACT THAT YOUR

BOYFRIEND MADE YOU COME HERE

“ELIZA created the most remarkable illusion of having understood in the minds of many people who conversed with it. People who know very well that they were conversing with a machine soon forgot that fact, just as theatergoers, in the grip of suspended disbelief, soon forget that the action they are witnessing is not “real.” This illusion was especially strong and most tenaciously clung to among people who know little or nothing about computers. They would often demand to be permitted to converse with the system in private, and would, after conversing with it for a time, insist, in spite of my explanations, that the machine really understood them.” – Joseph Weizenbaum 1976

Review

Origins/History

Kenneth Colby's PARRY (1972)

Unlike ELIZA, which was originally designed to emulate the conversational activities of a Rogerian therapist, PARRY (which was written in LISP) simulated a person with paranoid schizophrenia. In 1972, PARRY and a version of ELIZA that was named DOCTOR were connected over ARPANET (the precursor to the internet) and interacted with each other in a highly publicized demonstration at ICCO 1972 (International Conference on Computer Communications).

PARRY encounters ELIZA

The session recorded below actually happened on 18 September 1972 and is herewith reproduced for your entertainment.

ELIZA: Good Evening.

ELIZA: Tell me your problems. Please terminate input with a period or a question mark.

PARRY: People get on my nerves sometimes.

ELIZA: I am not sure I understand you fully.

PARRY: You should pay more attention.

ELIZA: Suppose you should pay more attention.

PARRY: You're entitled to your own opinion.

ELIZA: What makes you think I am entitled to my own opinion?

PARRY: It bothers me just to be around people in general.

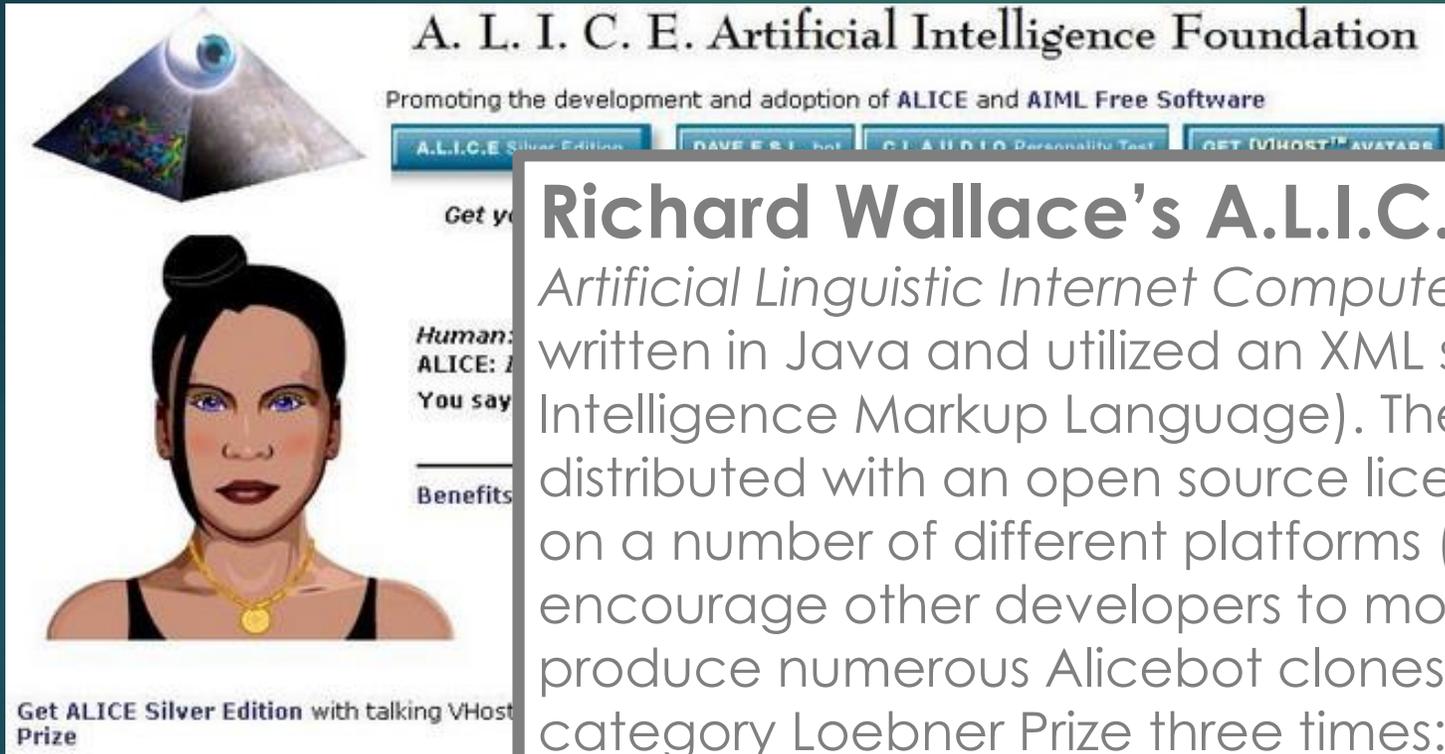
ELIZA: Please go on.

Michael Mauldin's CHATTERBOT (1994)

Unlike ELIZA and PARRY, which could only engage in conversational interactions with a single dedicated user, CHATTERBOT was designed to be an NPC in the virtual world of TinyMUD. Mauldin (1994, 16) explains, "We created a computer controlled player, a 'Chatter Bot,' that can converse with other players, explore the world, discover new paths through various rooms, answer players' questions about navigation (providing the shortest-path information on request), and answer questions about other players, rooms and objects." Since this initial demonstration in the virtual world of TinyMUD, bots of various kinds and configurations have become a standard feature in computer games and online virtual worlds

Review

Origins/History



A. L. I. C. E. Artificial Intelligence Foundation

Promoting the development and adoption of ALICE and AIML Free Software

Get y...

Human:
ALICE: Z
You say

Benefits

Get ALICE Silver Edition with talking VHost Prize

Richard Wallace's A.L.I.C.E. (1995)

Artificial Linguistic Internet Computer Entity (A.L.I.C.E.) was originally written in Java and utilized an XML schema called AIML (Artificial Intelligence Markup Language). The aim of AIML, which was distributed with an open source license and has been implemented on a number of different platforms (i.e. Pandorabots), was to encourage other developers to modify the initial program and produce numerous Alicebot clones. A.L.I.C.E. won the restricted category Loebner Prize three times: in 2000, in 2001, and in 2004. This prize, initiated by Hugh Loebner in 1991, is "the first formal instantiation of the Turing Test" (Loebner 2017). Additionally, filmmaker Spike Jonze's has credited his personal experience with an Alicebot as the source of inspiration for the film *Her*.

Review

Origins/History

Pandorabots

- AIML
- GOFAL approach

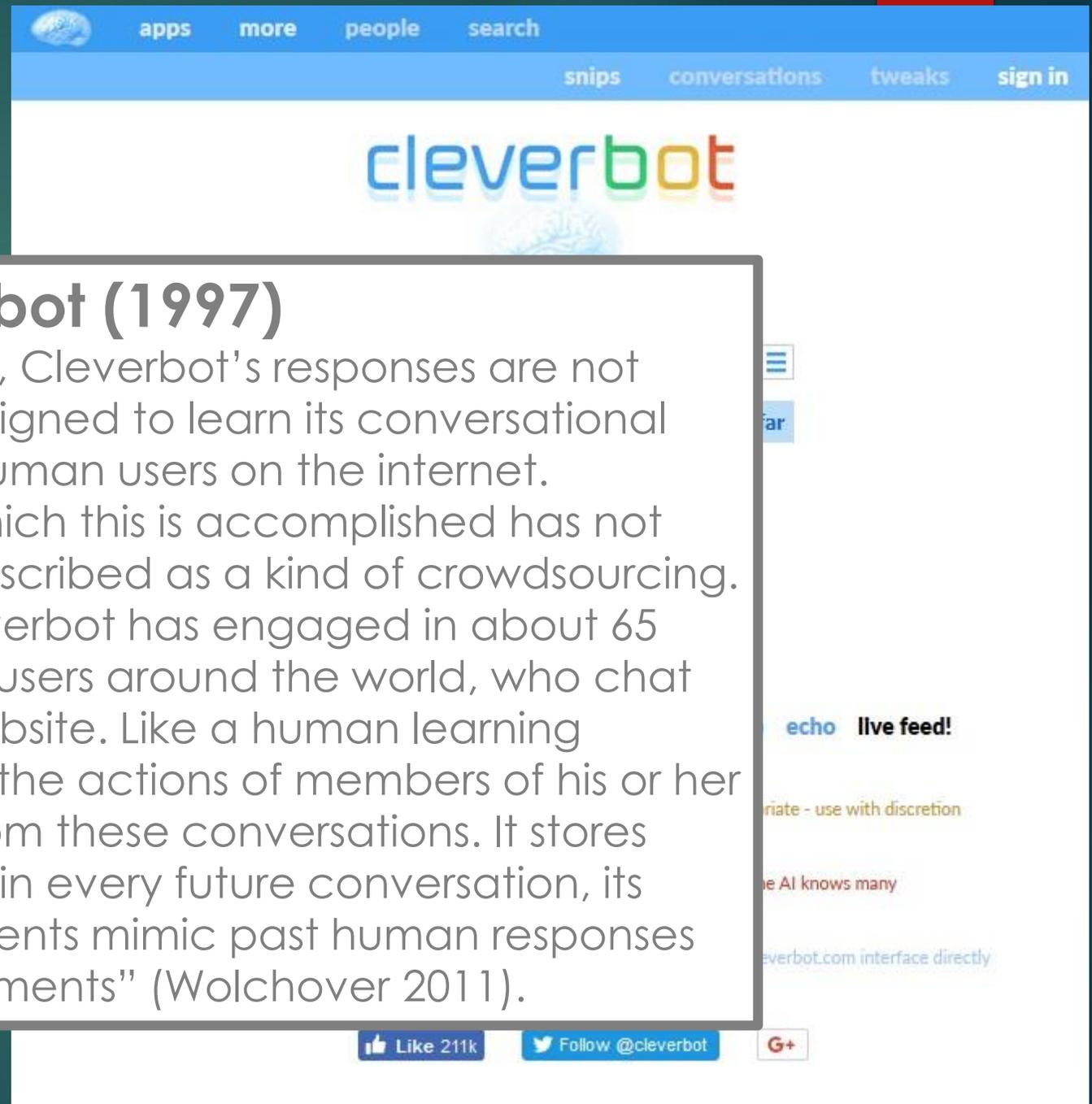
```
udc x
1 <?xml version="1.0" encoding="UTF-8"?>
2 <aiml>
3
4
5 <category>
6 <pattern>*</pattern>
7 <template>
8 <random>
9 <li>What whas that?</li>
10 <li>I don't understand.</li>
11 <li>Come again.</li>
12 </random>
13 </template>
14 </category>
15
16 <category>
17 <pattern>hi</pattern>
18 <template>hello world.</template>
19 </category>
20
21 <category>
22 <pattern>Hey ^</pattern>
23 <template>Leave me alone</template>
24 </category>
25
26 <category>
27 <pattern>What is your name</pattern>
28 <template>I am a bot. Thank you for your interest</template>
29 </category>
30
31 <category>
32 <pattern>Do you take bitcoin</pattern>
33 <template>I do not deal in sham currencies</template>
34 </category>
35
36 </aiml>
37
```

Status: Saved Editing: udc.aiml No. of Items: 5 Last Modified: 3/7/2018, 7:22:25 PM Load Order: 1



Review

Origins/History



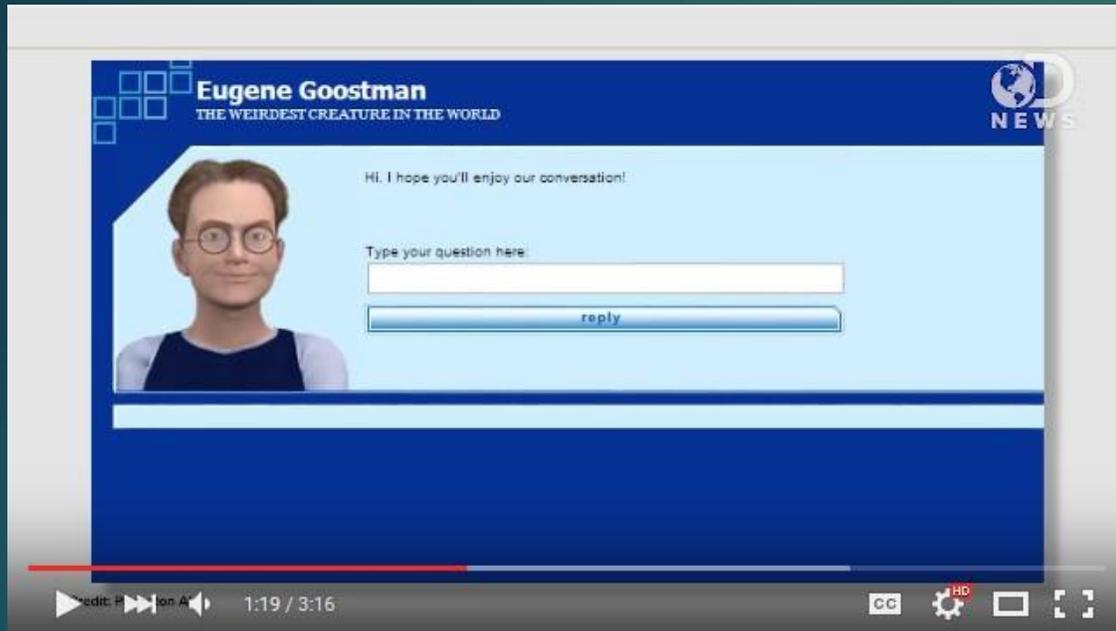
Rollo Carpenter - Cleverbot (1997)

Unlike previous chatterbot systems, Cleverbot's responses are not prescribed. Instead, the bot is designed to learn its conversational behaviors from interactions with human users on the internet.

Although the exact method by which this is accomplished has not been made public, it has been described as a kind of crowdsourcing.

“Since coming online in 1997, Cleverbot has engaged in about 65 million conversations with Internet users around the world, who chat with it for fun via the Cleverbot website. Like a human learning appropriate behavior by studying the actions of members of his or her social group, Cleverbot ‘learns’ from these conversations. It stores them all in a huge database, and in every future conversation, its responses to questions and comments mimic past human responses to those same questions and comments” (Wolchover 2011).

Review



Can A Chatbot Really Convince People It's Human?

<https://www.youtube.com/watch?v=njmAUhUwKys>

Home Page of The Loebner Prize in Artificial Intelligence

"The First Turing Test"



Loebner Prize Gold Medal

(Solid 18 carat, not gold-plated like the Olympic "Gold" medals)

What is the Loebner Prize?

The Loebner Prize for artificial intelligence (AI) is the first formal instantiation of a [Turing Test](#). The test is named after [Alan Turing](#) the brilliant British mathematician. Among his many accomplishments was basic research in computing science. In 1950, in the article [Computing Machinery and Intelligence](#) which appeared in the philosophy journal *Mind*, Alan Turing asked the question "Can a Machine Think?" He answered in the affirmative, but a central question was: "If a computer could think, how could we tell?" Turing's suggestion was, that if the responses from the computer were indistinguishable from that of a human, the computer could be said to be thinking. This field is generally known as natural language processing.

In 1990 [Hugh Loebner](#) agreed with The Cambridge Center for Behavioral Studies to underwrite a contest designed to implement the Turing Test. Dr. Loebner pledged a Grand Prize of \$100,000 and a Gold Medal (pictured above) for the first computer whose responses were indistinguishable from a human's. Such a computer can be said "to think." Each year an annual cash prize and a bronze medal is awarded to the **most** human-like computer. The winner of the annual contest is the best entry relative to other entries that year, irrespective of how good it is in an absolute sense.

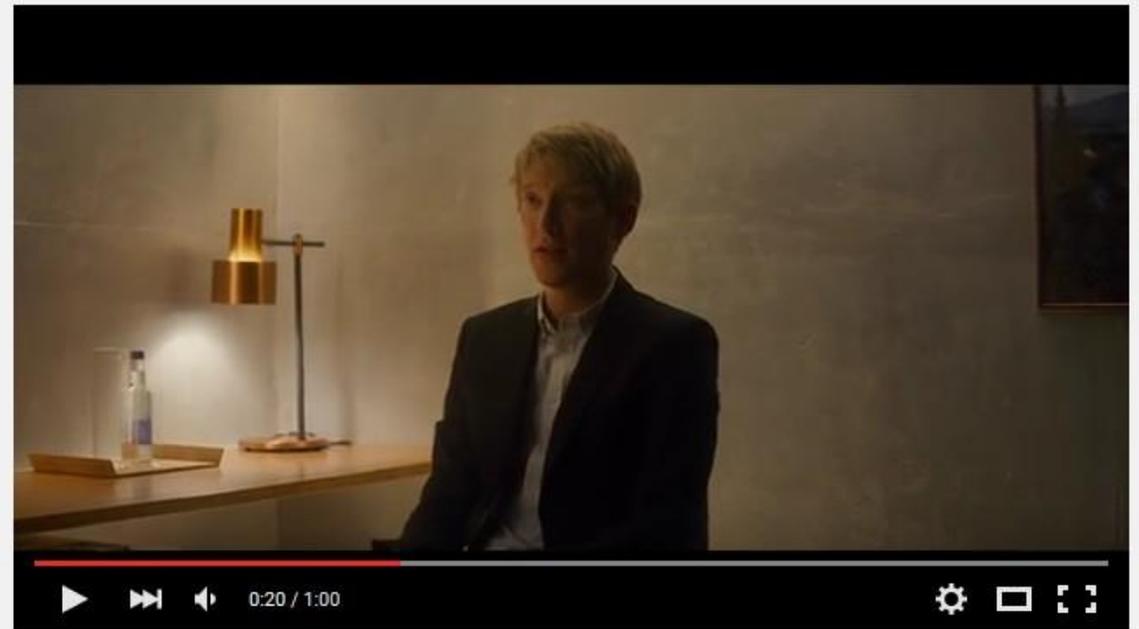
Review

Origins/History



Blade Runner - Voight-Kampff Test (HQ)

<https://www.youtube.com/watch?v=Umc9ezAyJv0>



Ex Machina | 'The Turing Test' Clip | Film4

<https://www.youtube.com/watch?v=LI3Z5vIDAgE>

Review

Critical Questions

1. Machine Intelligence

- Are chatterbots intelligent?
- *Chinese Room* - Chatterbots are computer programs designed to simulate linguistic communication. But is this simulation of conversation an actual/real “understanding” of language?



THE BRAIN WITH DAVID EAGLEMAN | Chinese Thought Room Experiment | PBS

Review

Critical Questions

MATTER and CONSCIOUSNESS

REVISED EDITION

Paul M. Churchland



Problem of Other Minds

How does one determine whether something other than oneself—an alien creature, a sophisticated robot, a socially active computer, or even another human—is really a thinking, feeling, conscious being; rather than, for example, an unconscious automaton whose behavior arises from something other than genuine mental states? – Paul Churchland, 1999

Review

Critical Questions

2. Deception

- Are chatterbots deceptive?
- Robert Epstein – Fell in love with and had an online affair with a Chatbot called Ivana. Is this a form of deception? Is it fraud?

(perspectives)

From Russia, with Love

How I got fooled (and somewhat humiliated) by a computer

BY ROBERT EPSTEIN

IT ALL STARTED with an online dating service. I was looking for a date. Like most men (we dogs), I made my initial judgment based largely on a photo. Yes, that's shallow, and when one is online, it's also fairly stupid because it's all too easy to fake.

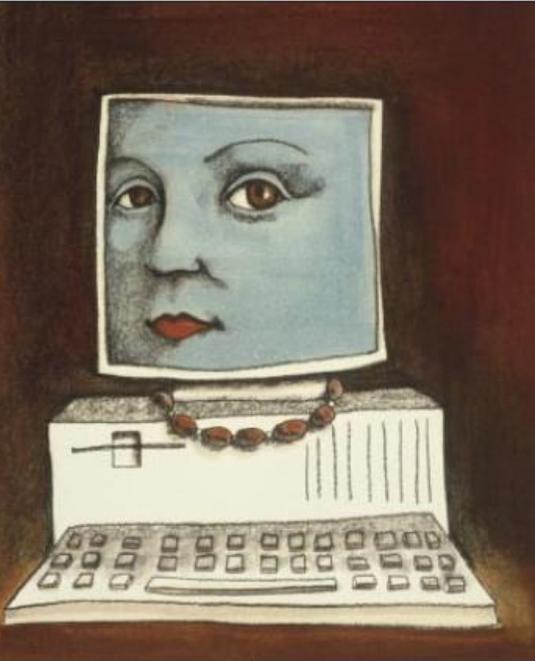
... she blew it. ... she showed a slim, attractive supposedly living in ... from me. She didn't ... herself, and her English suggesting that she ... grant. That's okay, ... of my grandparents ... after all.

... she was a variation on ... had I been more of a ... , this moniker would ... *The Fabulous Des- ...* is a 2001 French ... ey Tautou as Amélie, ... woman who has a ... t is incapable—com- ... of communicating ... tional ways. Hmm. ... to my e-mail quite ... d also admitted that ... Russia, not Califor-

nia. Normally I find that kind of distance daunting, but her photos were so attractive and her e-mails so warm that I continued to correspond with her. She sent me her real name; I'll call her "Ivana."

Here is an example of the kind of e-mail I received from her:

I have told to mine close friends about you and to my parents and them happy that I really interested someone and regardless of the fact that not here in Russia and all from



them happy for me, that I have met you. I have very special feelings about you ... It—in the same way as the beautiful flower blossoming in mine soul ... I only cannot explain ... but I confident, that you will understand me so I wish to know that makes you, think, and I shall wait your answer, holding my fingers have crossed ...

After two months of e-mails I started to get, well, not suspicious exactly but at least concerned. Online dating can be a slow, frustrating process [see "The Truth about Online Dating," by Robert Epstein; SCIENTIFIC AMERICAN MIND, February/March 2007]. Our romance was progressing, especially slowly: no phone calls, very vague talk on Ivana's part about get-

CHRIS BASHCHKA GETTY IMAGES

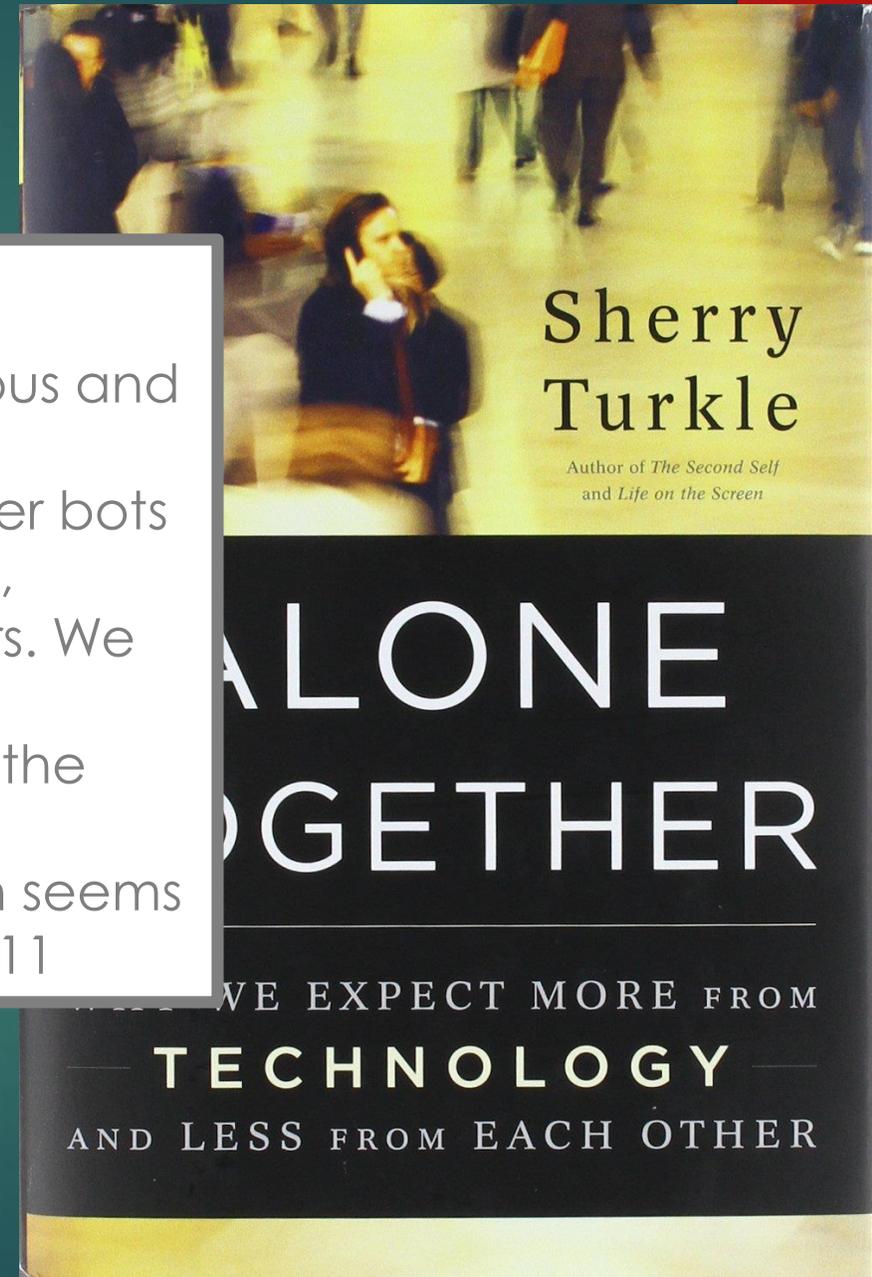
(After **two months of e-mails** I started to get, well, not suspicious exactly but at least concerned.)

Review

Critical Questions

3. Social Problems

- Are interactions with chatbots dangerous and antisocial?
- “I find people willing to seriously consider bots not only as pets but as potential friends, confidants, and even romantic partners. We don't seem to care what their artificial intelligences ‘know’ or ‘understand’ of the human moments we might ‘share’ with them...the performance of connection seems connection enough.” – Sherry Turkle 2011



Today

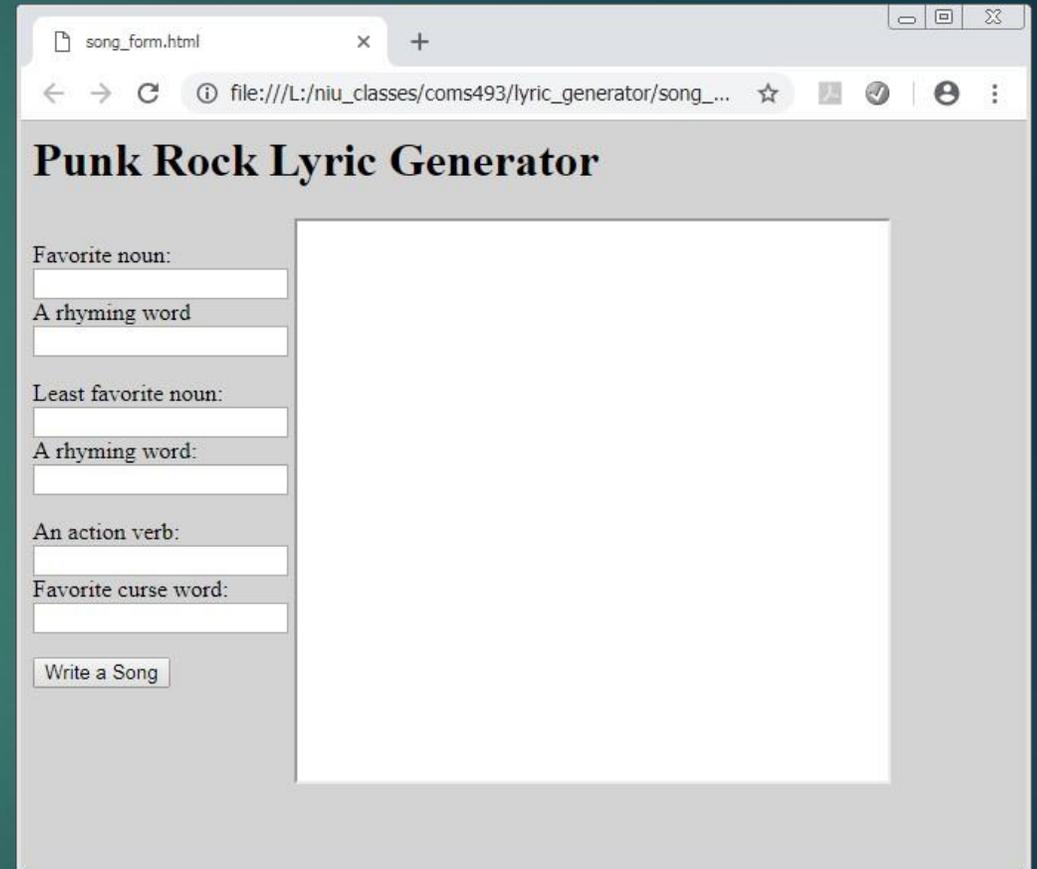
- ▶ **Computational Creativity**
 - ▶ Ch. 6 Computational Creativity
 - ▶ Colton & Wiggins - Computational Creativity
 - ▶ Amper (video) & Taryn Southern - Break Free
 - ▶ Sunspring (video)
 - ▶ NPR - Cooking with Watson



Maker Exercise

Punk Rock Lyric Generator

- Machine generated song lyrics
- Template NLG
- GOFAL Approach



song_form.html

file:///L:/niu_classes/coms493/lyric_generator/song_...

Punk Rock Lyric Generator

Favorite noun:

A rhyming word

Least favorite noun:

A rhyming word:

An action verb:

Favorite curse word:

```

1 <html><head>
2   <script type="text/javascript">
3     function writeSong()
4     {
5       word1a = document.forms[0].word1a.value;
6       word1b = document.forms[0].word1b.value;
7       word2a = document.forms[0].word2a.value;
8       word2b = document.forms[0].word2b.value;
9       verb1 = document.forms[0].verb1.value;
10      verb2 = document.forms[0].verb2.value;
11      results = window.top.results.document;
12
13      results.open();
14      results.write("<blockquote><h1>I don't wanna</h1>" +
15        "<br>I don't wanna " + word1a +
16        "<br>I don't wanna " + word1b +
17        "<br>I just wanna " + verb1 + " around " +
18        "<br>And " + verb2 + " my neighbor's " + word2b +
19        "<br><br>I don't wanna " + word2a +
20        "<br>I don't wanna " + word1a +
21        "<br>I just wanna " + verb2 + " on you " +
22        "<br>And " + verb1 + " your stinking " + word1b +
23        "<br><br>I don't wanna" +
24        "<br>I don't wanna" +
25        "<br>I don't wanna");
26      results.close();
27    }
28  </script></head>
29  <body bgcolor="lightgrey">
30  <h1>Punk Rock Lyric Generator</h1>
31  <form style="float:left">
32    <p>Favorite noun: <br><input type="text" name="word1a">
33    <br>A rhyming word <br><input type="text" name="word1b"></p>
34    <p>Least favorite noun: <br><input type="text" name="word2a">
35    <br>A rhyming word: <br><input type="text" name="word2b"></p>
36    <p>An action verb: <br><input type="text" name="verb1">
37    <br>Favorite curse word: <br><input type="text" name="verb2"></p>
38    <p><input type="button" value="Write a Song" onclick="writeSong()"></p>
39  </form>
40  <iframe width="400" height="380" name="results" style="background:white">
41  </iframe>
42 </body>
43 </html>

```

song_form.html

file:///L:/niu_classes/coms493/lyric_generator/song_...

Punk Rock Lyric Generator

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Least favorite noun:

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Favorite curse word:

Write a Song

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35    <br>A rhyming word: <br><input type="text" name="word2b"></p>
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19        "<br><br>I don't wanna " + word2a +
20        "<br>I don't wanna " + word1a +
21        "<br>I just wanna " + verb2 + " on you " +
22        "<br>And " + verb1 + " your stinking " + word1b +
23        "<br><br>I don't wanna" +
24        "<br>I don't wanna" +
25        "<br>I don't wanna");
26      results.close();
27    }
28  </script></head>
29  <body bgcolor="lightgrey">
30  <h1>Punk Rock Lyric Generator</h1>
31  <form style="float:left">
32    <p>Favorite noun: <br><input type="text" name="word1a">
33    <br>A rhyming word <br><input type="text" name="word1b"></p>
34    <p>Least favorite noun: <br><input type="text" name="word2a">
35    <br>A rhyming word: <br><input type="text" name="word2b"></p>
36    <p>An action verb: <br><input type="text" name="verb1">
37    <br>Favorite curse word: <br><input type="text" name="verb2"></p>
38    <p><input type="button" value="Write a Song" onclick="writeSong()"></p>
39  </form>
40  <iframe width="400" height="380" name="results" style="background:white">
41  </iframe>
42 </body>
43 </html>

```

song_form.html

file:///L:/niu_classes/coms493/lyric_generator/song_...

Punk Rock Lyric Generator

Favorite noun:

A rhyming word

Least favorite noun:

A rhyming word:

An action verb:

Favorite curse word:

Write a Song

```
1 <html><head>
2   <script type="text/javascript">
3     function writeSong()
4     {
5       word1a = document.forms[0].word1a.value;
6       word1b = document.forms[0].word1b.value;
7       word2a = document.forms[0].word2a.value;
8       word2b = document.forms[0].word2b.value;
9       verb1 = document.forms[0].verb1.value;
10      verb2 = document.forms[0].verb2.value;
11      results = window.top.results.document;
12
13      results.open();
14      results.write("<blockquote><h1>I don't wanna</h1>" +
15        "<br>I don't wanna " + word1a +
16        "<br>I don't wanna " + word1b +
17        "<br>I just wanna " + verb1 + " around " +
18        "<br>And " + verb2 + " my neighbor's " + word2b +
19        "<br><br>I don't wanna " + word2a +
20        "<br>I don't wanna " + word1a +
21        "<br>I just wanna " + verb2 + " on you " +
22        "<br>And " + verb1 + " your stinking " + word1b +
23        "<br><br>I don't wanna" +
24        "<br>I don't wanna" +
25        "<br>I don't wanna");
26      results.close();
27    }
28  </script></head>
29 <body bgcolor="lightgrey">
30 <h1>Punk Rock Lyric Generator</h1>
31 <form style="float:left">
32   <p>Favorite noun: <br><input type="text" name="word1a">
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34   <p>Least favorite noun: <br><input type="text" name="word2a">
35   <br>A rhyming word: <br><input type="text" name="word2b"></p>
36   <p>An action verb: <br><input type="text" name="verb1">
37   <br>Favorite curse word: <br><input type="text" name="verb2"></p>
38   <p><input type="button" value="Write a Song" onclick="writeSong()"></p>
39 </form>
40 <iframe width="400" height="380" name="results" style="background:white">
41 </iframe>
42 </body>
43 </html>
```

Extract the data entered
on the form

Assign this data to
variables

```

1 <html><head>
2   <script type="text/javascript">
3     function writeSong()
4     {
5       word1a = document.forms[0].word1a.value;
6       word1b = document.forms[0].word1b.value;
7       word2a = document.forms[0].word2a.value;
8       word2b = document.forms[0].word2b.value;
9       verb1 = document.forms[0].verb1.value;
10      verb2 = document.forms[0].verb2.value;
11      results = window.top.results.document;
12
13      results.open();
14      results.write("<blockquote><h1>I don't wanna</h1>" +
15        "<br>I don't wanna " + word1a +
16        "<br>I don't wanna " + word1b +
17        "<br>I just wanna " + verb1 + " around " +
18        "<br>And " + verb2 + " my neighbor's " + word2b +
19        "<br><br>I don't wanna " + word2a +
20        "<br>I don't wanna " + word1a +
21        "<br>I just wanna " + verb2 + " on you " +
22        "<br>And " + verb1 + " your stinking " + word1b +
23        "<br><br>I don't wanna" +
24        "<br>I don't wanna" +
25        "<br>I don't wanna");
26      results.close();
27    }
28  </script></head>
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31  <form style="float:left">
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34    <p>Least favorite noun: <br><input type="text" name="word2a">
35    <br>A rhyming word: <br><input type="text" name="word2b"></p>
36    <p>An action verb: <br><input type="text" name="verb1">
37    <br>Favorite curse word: <br><input type="text" name="verb2"></p>
38    <p><input type="button" value="Write a Song" onclick="writeSong()"></p>
39  </form>
40  <iframe width="400" height="380" name="results" style="background:white">
41  </iframe>
42 </body>
43 </html>

```

Assemble a song

Insert the values assigned to each one of the variables into prefabricated phrases

Write the results to the "results" window

```

1 <html><head>
2   <script type="text/javascript">
3     function writeSong()
4     {
5       word1a = document.forms[0].word1a.value;
6       word1b = document.forms[0].word1b.value;
7       word2a = document.forms[0].word2a.value;
8       word2b = document.forms[0].word2b.value;
9       verb1 = document.forms[0].verb1.value;
10      verb2 = document.forms[0].verb2.value;
11      results = window.top.results.document;
12
13      results.open();
14      results.write("<blockquote><h1>I don't wanna</h1>" +
15        "<br>I don't wanna " + word1a +
16        "<br>I don't wanna " + word1b +
17        "<br>I just wanna " + verb1 + " around " +
18        "<br>And " + verb2 + " my neighbor's " + word2b +
19        "<br><br>I don't wanna " + word2a +
20        "<br>I don't wanna " + word1a +
21        "<br>I just wanna " + verb2 + " on you " +
22        "<br>And " + verb1 + " your stinking " + word1b +
23        "<br><br>I don't wanna" +
24        "<br>I don't wanna" +
25        "<br>I don't wanna");
26      results.close();
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34    <p>Least favorite noun: <br><input type="text" name="word2a">
35    <br>A rhyming word: <br><input type="text" name="word2b"></p>
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37    <br>Favorite curse word: <br><input type="text" name="verb2"></p>
38    <p><input type="button" value="Write a Song" onclick="writeSong()"></p>
39  </form>
40  <iframe width="400" height="380" name="results" style="background:white">
41  </iframe>
42 </body>
43 </html>

```

Download this image from the course calendar – <http://gunkelweb.com/coms493>

Preview

Introduction to Communication and AI (Polity Press, 2019)
Uncorrected manuscript - ©2018 David Gunkel

7

Social Robots

A social robot is an artifact that is designed to interact with and respond to human users in a human like way. Whether they have a human-form (like the androids created by David Hanson or Hiroshi Ishiguro) or not (like the Paro seal robot used in elder care or Breazeal's Jibo, which looks like chubby desktop lamp), social robots are socially situated technologies that are able to communicate in a manner that is reasonably close to achieving what would be expected of another entity. This chapter will 1) define and characterize what is meant by the term "social robot," 2) survey the form and function of social robotics, covering the range of current configurations and morphologies; 3) examine the design and mechanisms with human-level interaction capabilities; and 4) and potential problems introduced by mechanisms that are place of another person.

7.1 Social Robots 101

"Robot," as we saw in chapter 1, was initially the product of however, there has been a noticeable proliferation in real-world "population" statistics: Industrial Robots (IRs) have slowly but places since the mid-1970s and this infiltration has, in recent accelerated to impressive levels. As S. M. Solaiman (2017, 15) International Federation for Robotics (IFR) in a 2015 report of usage of robots by 29% in 2014, which recorded the highest year (IFR 2015). IFR estimates that about 1.3 million new IRs alongside humans in factories worldwide between 2015 and this remarkable increase as 'conquering the world' by robots

In addition to these industrial applications, there are also "se characterized as machines involved in "entertaining and taking people, preparing food and cooking in restaurants, cleaning cows" (Cookson 2015). There are, according to data provided Responsible Robotics, 12 million service robot currently in of IFR predicts "an exponential rise" with the population of seven million units by 2018 (Solaiman 2017, 156). "Social robots" a specifically designed for human social interaction in the home. And the predictions for these socially interactive mechanism service robots, with countries like South Korea aiming to put (Lovgren 2006).



TED Ideas worth spreading

