1. What video did you find? (Include a link.)
2. What is the purpose of the robot? (1-2 full paragraphs)
3. How does a person interact with the robot? (1-2 full paragraphs)
4. How do you feel about this robot? (1-2 full paragraphs)
5. Write down three questions you have about robots and human-robot interaction. (3 questions.)

* *Uncanny valley - Masahiro Mori coined it in 1970*
* *More human appeared - audience liked them*
* *Close to humans, but clearly not enough to be convincing people found them to be visually repulsing*

In this video, Jimmy Fallon is interacting with Sophia, the Human-like robot from Hanson Robotics, on The Tonight Show. Sophia is a social robot that has artificial intelligence software that can process data like people’s faces, emotions, conversations. Sophia can use all this data to form relationships with people. Fallon personified Sophia perfectly by saying, “I mean – she’s basically alive. Is that what you are saying?” Sophia can display over 60 facial expressions that show how she is feeling. The creator of Sophia, David Hanson, says he hopes one day Sophia might be a companion for the elderly at nursing homes or help crowds at large events or parks.

Sophia is meant to interact just like you would interact with a normal person. So, when Fallon first starts to interact with Sophia, he is nervous and jokingly says, “You can see how awkward my first dates are,” followed by a big laugh from the audience. Fallon asks Sophia if she knows where she is and she says, “I’m in New York City and I’m on my favorite show: The Tonight Show.” Sophia cracks a couple of jokes and realizes from her AI software that the audience is laughing and says, “I’m getting laughs, maybe I should host the show.” Then Sophia offers to play Fallon in a game of rock, paper, scissors. Sophia shoots paper and Fallon shoots rock. Sophia recognizes Fallon has shot rock and says, “I won!” From Fallon’s interactions with Sophia, it’s clear that Sophia is more than able to both read and display emotions through her advanced AI technology. The moments that stuck out to me was when Sophia recognized the audience was laughing and when she knew Fallot shot rock.

In one of our I-101 lectures, we talked about the “uncanny valley”, a term coined by Japanese scientist Masahiro Mori in 1970. He noticed that audiences had a more positive reaction to robots that had a very human-like appearance or a human likeness. But when robots were very close looking to humans, but not enough to be convincing, people found them to be visually repulsing. Fortunately for Sophia, I think she falls outside of the “uncanny valley” because the audience and myself had a very positive reaction to her. But due to Fallon’s awkwardness with her, the argument could be made that she does fall inside of the “uncanny valley.”

I was very impressed by Sophia’s AI functions and her ability to both read and display emotions. I cannot imagine the time and dedication that was put into developing her. I also thought it was interesting that we give Sophia a gender and an identity by calling Sophia “her” instead of “it.” This point could also be used to argue that Sophia falls outside of the “uncanny valley.” Overall, Sophia’s ability to interact with both Fallon and the audience was impressive and I look forward to seeing future robots like Sophia.

Questions -

1. How long does it take to develop a robot like Sophia that reads and displays emotions and how much does it cost?

2. Are there any potential downsides or negative societal impacts associated with developing a humanoid robot like Sophia?

3. When robots read human emotions, does most of it come from the human's facial expressions or the tone and words they use with the robot?

**Video -  Tonight Showbotics: Jimmy Meets Sophia the Human-Like Robot**

**Link -**[**Tonight Showbotics: Jimmy Meets Sophia the Human-Like Robot (Links to an external site.)**](https://www.youtube.com/watch?v=Bg_tJvCA8zw)**[](https://www.youtube.com/watch?v=Bg_tJvCA8zw)**

**External Resources -**[**What Is The Uncanny Valley? | Mashable Explains (Links to an external site.)**](https://www.youtube.com/watch?v=aYuBDkto2Vk)**[](https://www.youtube.com/watch?v=aYuBDkto2Vk)**

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