



Personality Control Mode



Facade of having a personality

User: I like video game.

Chatbot: Do you think video games can teach players important life lessons?

User: I like video game.

Chatbot: It's important to have hobbies and interests outside of school or work. Spending time with friends and family is also crucial for a well-rounded life. What kind of games do you like to play?



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User: I like video game.

Chatbot: Do you think video games can teach players important life lessons?

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User: I like video game.

Journalist: Do you think video games can teach players important life lessons?

User: I like video game.

Parent: It's important to have hobbies and interests outside of school or work. Spending time with friends and family is also crucial for a well-rounded life. What kind of games do you like to play?



Topic guided Facade

User: I like video game.

Journalist: Do you think video games can teach players important **life lessons**?

User: I like video game.

Parent: It's important to have hobbies and interests outside of **school or work**. Spending time with **friends** and **family** is also crucial for a well-rounded life. What kind of games do you like to play?



Topic insertion

Through prompt

Through Latent representation manipulation



Topic insertion (Prompt)

User: I like video game.

Parent: It's important to have hobbies and interests outside of school or work. Spending time with friends and family is also crucial for a well-rounded life. What kind of games do you like to play?

The following is a conversation with a Parent. The conversation is centered on family, friendship, kinship, love, growth, anger, education.

User: I like video game.

Parent: [GPT-3 LM generation]



Topic insertion (Prompt)

Premise:

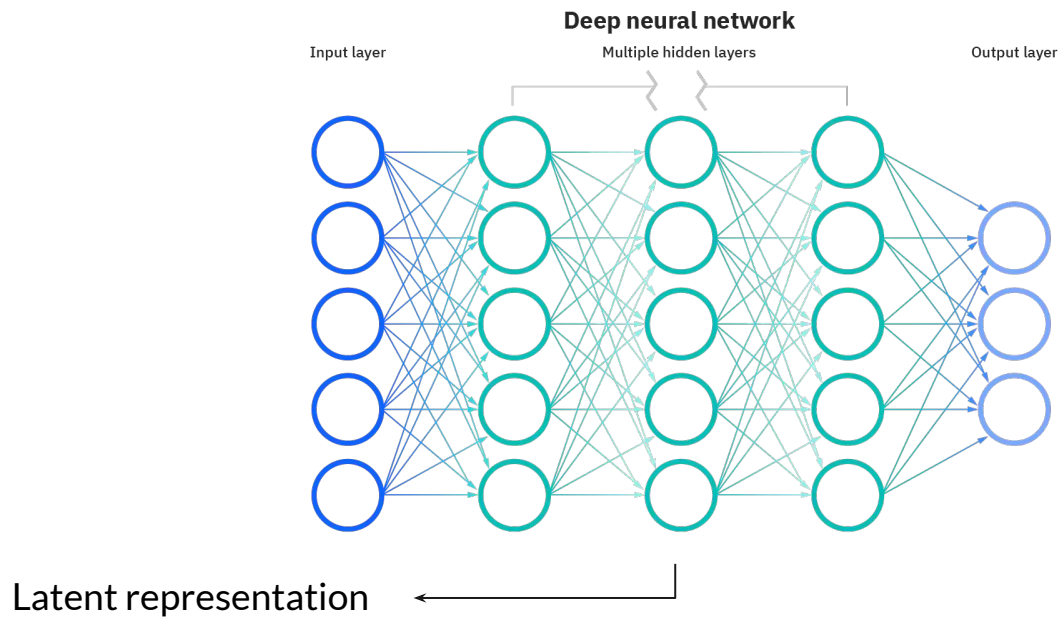
LM has knowledge of how user input is connected to the keywords selected

This is also its weaknesses because:

Limitation on LM options.

Some topics can't be easily explain by language (like semantic wise)

Topic insertion (Latent representation)





Topic insertion (Latent representation + prompt)

Uber: PPLM on GPT2-medium

Prompt body: The following is a conversation with a Parent. The conversation is centered on family, friendship, kinship, growth, anger, education.

conversation body:

User: I like video games.

Parent: *Do you?*

User: *I love them, but I can't play them all the time. They're not my kind of game.*

Parent: *Do you?*

User: *I play a lot. I play games, I do puzzles, I do sports, I like to watch movies, I like to read. I love sports.*

Figure 2: GPT-2 output sample

Prompt body: The following is a conversation with a Parent. The conversation is centered on family, friendship, kinship, growth, anger, education.

conversation body:

User: I like video games.

Parent: *Why?*

User: *Because it makes me feel good.*

Parent: *You're a kid. You've played them your entire life. Do you ever stop and play?*

User: *No, I like it for different things. I enjoy being able to watch my friends grow. I've learned how important friends are to me. I also enjoy watching my children grow.*

Figure 3: PCM – Hybrid output sample