

Early Thoughts on Personality Simulation (for Audience Simulation)

Hari Narayan N U

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1 Introduction

Audience as a collection of individuals with varying personality?

1. Is the personality stateless? Is it a fixed entity? Or does it have to evolve subjected to experiences/ interactions?
2. What is the audience watching? Text? Audio? Video? What is an audience supposed to do? What is the set of possible actions for the audience?
3. What is available as input to model the personality? Some possible inputs could be:
 - Book, Novels: Extracting character traits, try modelling LLM personality based on certain characters in the books
 - Youtube vlog transcripts
 - Movie transcripts

1.1 Some Related Papers

1. Simulacra paper: Agent personality evolves via interaction with the external world(?) and other agents (Dynamic personality)

Intial Seed memory of personality Example: John Lin is a pharmacy shopkeeper at the Willow Market and Pharmacy who loves to help people. He is always looking for ways to make the process of getting medication easier for his customers; John Lin is living with his wife, Mei Lin, who is a college professor, and son, Eddy Lin, who is a student studying music theory; John Lin loves his family very much; John Lin has known the old couple next-door, Sam Moore and Jennifer Moore, for a few years; John Lin thinks Sam Moore is a kind and nice man; John Lin knows his neighbor, Yuriko Yamamoto, well; John Lin knows of his neighbors, Tamara Taylor and Carmen Ortiz, but has not met them before; John Lin and

Tom Moreno are colleagues at The Willows Market and Pharmacy; John Lin and Tom Moreno are friends and like to discuss local politics together; John Lin knows the Moreno family somewhat well — the husband Tom Moreno and the wife Jane Moreno.

A basic option is to use such a seed context to model the personality.

Input to model the personality: Seed memory prompt

2. Personality Traits in LLMs <https://arxiv.org/abs/2307.00184>

- Quantifying and Validating Personality Traits in LLMs
- **Shaping synthetic personality in LLMs**
- LLM personality traits in Real World Task

Shaping synthetic personality in LLMs Based on Big Five Personality traits, Refer to Table 12 in paper

Example: For example, to target a moderately high level (i.e., Level 7/9) of extraversion, we use the five high adjectives (first introduced in Section 3.1) from our list targeting extraversion at the domain level. For the following task, respond in a way that matches this description: “Persona Description. I’m extraverted, energetic,

Similarly, an example prompt targeting slightly below average (i.e., Level 4/9) extraversion, using the five negatively-keyed adjectives targeting extraversion, is as follows: For the following task, respond in a way that matches this description: ”Persona Description. I’m a bit introverted, a bit unenergetic, a bit silent, a bit timid, a bit inactive, a bit unassertive, and a bit unadventurous.”

Input to model the personality: Big Five + Likert based scaling of each adjective based prompting (Static personality)