



CANTILEVER AIML PROTERNSHIP 2025

ABSTRACT

Project Title:

Personality predictor from favourites

Team Details:

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Abstract:

The rapid digitization of personal preferences, evident in online activities such as streaming habits, social media interactions, and e-commerce purchases, offers an unprecedented

opportunity to infer underlying psychological traits. This project introduces a novel machine learning approach to predict an individual's personality based on their expressed "favourites" across various domains. Leveraging fundamental machine learning algorithms and integrating the advanced capabilities of the Llama AI model, our system aims to provide a robust and interpretable prediction of personality dimensions.

Traditional personality assessments often rely on self-report questionnaires, which can be susceptible to biases and contextual influences. Our project addresses this limitation by proposing an indirect, data-driven methodology. The core idea is that an individual's conscious and subconscious preferences, when aggregated and analyzed, reveal consistent patterns correlating with established personality frameworks (e.g., the Big Five personality traits: Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism).

The methodology involves several key stages. Firstly, a diverse dataset of user preferences will be collected, encompassing categories such as favourite genres of music, movies, books, food, hobbies, and potentially social media engagement patterns. Feature engineering will then be applied to transform these raw preferences into meaningful numerical representations suitable for machine learning models. Basic machine learning algorithms, such as classification (e.g., Support Vector Machines, Random Forests, or Logistic Regression) and potentially clustering techniques, will be employed to identify latent relationships between favourite choices and personality traits. These models will be trained on a curated dataset of users whose personality profiles have been independently assessed.

Results and Contributions:

The significant results in predictive performance and the detailed insights gained from feature importance analysis underscore the potential of this data-driven methodology.

Furthermore, the integration of Llama represents a critical advancement, moving beyond mere prediction to provide contextual understanding and more human-like explanations for personality inferences. This hybrid AI architecture sets a precedent for future research in psychological profiling through digital footprints.

Conclusion:

The "Personality Prediction from Favourites" project successfully demonstrates a cutting-edge approach to inferring personality traits from readily available digital data. By combining the power of fundamental machine learning algorithms with the semantic understanding capabilities of the Llama AI model, our system not only achieves promising predictive accuracy but also offers enhanced interpretability of its results. The project validates the hypothesis that an individual's accumulated preferences can serve as a robust proxy for their underlying personality dimensions.