# Developing an Interactive User Interface for Multimodal Explanations Across Varied Data Types

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**Opis teme**: This project idea revolves around creating a sophisticated and intuitive interface engineered to deliver multimodal explanations suitable for various data types including tabular, textual, and visual data. The interface should be designed to incorporate a wide array of explanation methods, tailored to meet the specific interpretability requirements of different users. By integrating diverse interpretable models and techniques, the interface facilitates a comprehensive understanding of the decision-making processes underpinning machine learning models employed across multiple domains.

**Zadaci i ciljevi**: To successfully develop an interactive user interface for multimodal explanations across varied data types, the student will thoroughly analyze requirements to ascertain specific user needs and technical demands. This phase will involve gathering insights from relevant literature, possible surveys, and interviews with potential users and analyzing different data types to identify unique challenges. Following this, the design phase will see the creation of an intuitive, user-friendly interface that can adapt to multiple explanation modalities and data formats. Subsequently, the student will integrate various explainable AI methods tailored to different data types, supported by a robust backend capable of real-time explanation generation. The development will continue with the implementation of interactive features that allow users to customize their explanatory experience, adjust explanation models, and explore detailed explanations as desired. The interface will be published on GitHub as an open-source contribution upon successful validation. Continuous improvement efforts will be made post-deployment to refine the system based on user feedback and technological advances, aiming to expand the interface's capabilities to include additional data types and explanation methods.

**Lista referenci**:

1. "Interpretable Machine Learning: A Guide for Making Black Box Models Explainable" by Christoph Molnar (2019)
2. Miller, T. (2019). Explanation in artificial intelligence: Insights from the social sciences. Artificial intelligence, 267, 1-38.
3. Pitale, A., & Bhumgara, A. (2019, November). Human-computer interaction strategies—designing the user interface. In 2019 International Conference on Smart Systems and Inventive Technology (ICSSIT) (pp. 752-758). IEEE.