Technology Review

Introduction:

This technology review looks at the machine learning tools and methods used in studying socioeconomic issues, especially for predicting poverty with the WDI dataset. The importance of this review is to help researchers choose the right models and analyze data effectively in socioeconomic studies.

Technology overview:

This review will look at different machine learning tools, including popular Python libraries like Scikit-learn, TensorFlow, and Keras. These libraries are often used for preparing data, training models, and checking their performance. They offer many algorithms that are great for tasks like regression and classification.

Relevance to Our Project:

Machine learning tools are really important for this project because they help us analyze complicated data sets like WDI, which allows us to make precise predictions about poverty. They tackle issues with large amounts of data and its complexity, making it easier to process and understand the information.

Comparison and Evaluation:

- Scikit-learn is great for classic machine learning methods and is beginner-friendly.
- TensorFlow and Keras are super powerful for deep learning but need more computer power and can be harder to learn.
- All these tools are free and open source, so anyone can use them.

Use Cases and Examples:

Research studies, like those predicting poverty through machine learning, show that these libraries have been effectively used in socioeconomic research to reveal predictive trends.

Identity Gaps and Research Opportunities:

Although these technologies offer strong features, there are still shortcomings in creating algorithms that fit specific socioeconomic situations. Future research could focus on developing personalized adjustments or combining different models to take advantage of the best aspects of various methods.

Conclusion:

To sum up, the technologies discussed are essential for analyzing data in poverty research. They significantly improve the project's ability to reveal insights and create predictive models.

Proper Citation:

- Scikit-learn. (n.d.). Retrieved from https://scikit-learn.org/stable/
- TensorFlow. (n.d.). Retrieved from https://www.tensorflow.org/