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**Frontier Tech Leaders Global Cohort Machine Learning Bootcamp #2**

**Title:**

**Reducing Urban Poverty Through Economic Data Analysis**

**Group9:**

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**1. Project Idea:**

This project aims to analyze global poverty and inequality data to identify key factors contributing to urban poverty. By understanding these factors, the project will develop targeted interventions to reduce urban poverty effectively. The specific goal is to utilize advanced data analysis techniques to pinpoint urban areas most affected by poverty and propose data-driven solutions to mitigate these effects.

**2. Relevance to Sustainable Development Goals (SDGs):**

The project directly aligns with Sustainable Development Goal 1: No Poverty. It seeks to provide detailed insights into poverty dynamics and inequality, thereby supporting efforts to eradicate poverty and reduce inequalities in urban settings across various countries. The insights gained can also impact other SDGs, such as SDG 10: Reduced Inequality, by informing policies that address economic disparities.

**3. Literature Examples:**

* Example 1: A study by the World Bank using the Poverty and Equity Database analyzed the impact of fiscal policy on poverty reduction across multiple countries, highlighting effective strategies that could be adapted for urban contexts.
* Example 2: Research on urban poverty in South Asia, utilizing similar databases, provided insights into the role of urbanization in poverty dynamics, offering a comparative analysis that can inform local interventions.
* Financial Inclusion and Poverty Alleviation" explores how financial inclusion impacts poverty reduction in various countries. This study discusses the positive effects of increased financial access on reducing poverty levels by enabling better economic participation through access to banking and financial services. It particularly highlights the significant positive impact on low-income households in sub-Saharan Africa, demonstrating that financial inclusion can lead to greater wealth and welfare benefits for the poor (Journal of Economic Structures, 2017).
* "Poverty Reduction of Sustainable Development Goals in the 21st Century: A Bibliometric Analysis" provides an overview of the academic research trends related to poverty reduction. This study offers a bibliometric analysis of articles focused on poverty alleviation, indicating significant growth in research interest particularly aligned with the SDG timeline. It underlines the importance of accessing quality data and materials to aid poverty reduction plans and discusses the shifts in publication trends that reflect global policy focus (Frontiers in Social Science, 2021).
* "Does financial inclusion reduce poverty and income inequality in developing countries?" investigates the role of financial inclusion in reducing both poverty and income inequality across developing nations. The study finds that higher financial inclusion correlates with economic growth and reduced poverty rates, particularly in middle and high-income countries, though it shows a less clear impact on income inequality. This analysis underscores the importance of inclusive financial policies to enable broader economic participation and poverty reduction (Journal of Economic Structures, 2018).

**4. Describe Your Data:**

The data for this project will be sourced from the World Bank's Poverty and Equity Database, which includes indicators like poverty headcount ratios, the poverty gap, Gini index, and income distributions. The data are updated daily and available in CSV format, allowing for real-time analysis and accurate modeling. Preprocessing will involve cleaning, normalizing, and categorizing data to prepare it for analysis.

**5. Approach (Machine Learning or Deep Learning):**

A machine learning approach will be used due to its suitability for the structured nature of the data and the need for interpretable models that can influence policy decisions. Techniques like regression analysis, clustering, and decision trees will be employed to identify patterns and predict areas at high risk of urban poverty. The choice of machine learning over deep learning is justified by the structured format of the database and the project's focus on interpretability and direct applicability to policy interventions.