

Data Science Competition “Pover-T Test”  
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Social justice issues occur almost in any aspect of society because of unfair relationships between an individual and society. "Well, when someone does not have the same access to these rights and privileges due to discrimination, this is a threat to social justice and is commonly called a social injustice. Social injustices occur when a person, people, or groups of people are treated unfairly - discriminated against - strictly based upon a certain characteristic of the person or group of people. These characteristics include race (racism), age (ageism), gender (sexism), religion, and sexuality (heterosexism)".

The idea that all people are entitled to human rights is central to a world free from poverty. Poverty is not always caused by a lack of economic resources; it is often a result of discrimination or social injustice that prevents people from accessing tools, resources and education they need to improve their situation. The purpose of data science competition I found is "Pover-T Tests: Predicting Poverty" was to collect household survey data to measure, track, and predict poverty in three developing countries. The goal of the competition could be reached with machine learning approach. One of the problems with collecting household survey data is that it could take a lot of time and it is very expensive, but with machine learning tools the prediction could be calculated faster and with less cost. Another problem is that current poverty data is not recent and should not be used to make any decisions to analyze data or create policies.

The problem was being solved by creating a performing model and automated machine learning algorithm by outside experts to reduce poverty. There were data scientists from more than 130 countries participating in the competition, "they built algorithms to predict household-level poverty status using surveys data from three developing countries, each with a different distribution of wealth". The goal was not only to reduce poverty in those participating countries with machine learning tools, but to choose the best one to use it in the future to reduce poverty in

the whole world. The best algorithms were chosen to be used, so the World Bank can now build on these open source machine learning tools to help predict poverty, optimize survey data collection and analysis, and support work to end extreme poverty.

The poverty issues are everywhere in the world and sometimes the cause of it is inequality in the society. Besides data scientists, statisticians and other professionals who are trying to reduce poverty, Congress can take to cut poverty, boost economic security, and expand the middle class. There are several ways to improve the situation of poverty such as creating new jobs, raising the minimum wage, supporting pay equality, providing paid leave and sick days, making education and child care more affordable, and expanding Medicaid. Some of those changes would improve social justice. For example, female full-time workers earn 78 cents for every 1\$ earned by men. There is a gender wage gap, that needs to be closed to reduce poverty and eliminate social justice issues. Fixing this gap would cut poverty in half for working women and their families.

To sum up, the problem of poverty is very serious and affects a lot of countries and its citizens. Data science can play a big role in improving social justice issues which leads to poverty. This competition shows that there are attempts being made to solve this problem with new technologies and developing machine learning algorithms.

## References:

(n.d.). Retrieved from <https://study.com/academy/lesson/social-justice-lesson-for-kids-definition-issues-examples.html>

Dfava. (2013, October 30). CARE's Poverty & Social Justice Work. Retrieved from <https://www.care.org/work/poverty/cares-poverty-social-justice-work>

DrivenData. (n.d.). Pover-T Tests: Predicting Poverty. Retrieved from <https://www.drivendata.org/competitions/50/worldbank-poverty-prediction/>

Vallas, R., & Boteach, M. (2014, September 17). The Top 10 Solutions to Cut Poverty and Grow the Middle Class. Retrieved from <https://www.americanprogress.org/issues/poverty/news/2014/09/17/97287/the-top-10-solutions-to-cut-poverty-and-grow-the-middle-class/>