Google AI Can Now Predict Your Race and Political Party

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Google Street View Car

(Image via Wikipedia)

In a paper published earlier this year, Stanford computer scientist Timnit Gebru wrote about how neighborhoods can be evaluated by the makes and models of the cars parked in their driveways. The paper appeared in the Proceedings of the National Academy of Sciences and it's an interesting read.

By analyzing the images already available as part of Google Street Views, the research team was able to identify which neighborhoods were Republican and which were Democrat as well as many other characteristics.

It determined that in those areas where the number of sedans is higher than pickup trucks, there's an 88 percent chance of the district voting Democratic. Where there are more pickup trucks, there's an 82 percent chance it's a Republican-voting district.

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The project devised an automated methodology that estimated the social characteristics of regions covering 200 U.S. cities based on analyzing 50 million images from Street Views. The images were originally created by Google sending cars through

every neighborhood in the country, capturing images that are then displayed and accessed on Google Maps. Their automated process took two weeks, compared to 15 years if the images had been analyzed by hand.

The automated process to analyze the images was accomplished using computers and artificial intelligence software called "convolutional neural networks" that learned to recognize the vehicles by identifying unique features on each. That allows the computer to identify the make and model, year, value, and fuel efficiency of the vehicle.

To characterize the automobiles, they hired Amazon Turk workers to develop a library of car images from Edmunds.com, Cars.com, and Craig's List. Their data came up with 2,657 visually distinctive categories, covering cars found in the U.S. since 1990.

So, what else did their analysis show from the automobile information? They came to the following conclusions, as quoted from the report:

- Hondas and Toyotas most strongly indicate an Asian neighborhood.

- Chryslers, Buicks and Oldsmobiles "are positively associated with African-American neighborhoods."

- Pickup trucks and Volkswagens are associated with white neighborhoods.

- Sedans are most associated with Democratic voter precincts; Republican-leaning precincts are most associated with extended-cab pickup trucks.

The researchers noted how this process could be a supplement or even a substitute for the way census data is now acquired

because they found good agreement between their findings and those from the manual surveys.

They also noted that the U.S. spends more than $250 million each year on the American Community Survey (ACS) that sends workers door-to-door to interview the residents in each home in order to gather statistics relating to race, gender, education, occupation, and more. The Census Bureau conducts their survey once every 10 years. While both are more accurate, they each take a long time to analyze and don't pick up recent trends.

The research team even hypothesized that when self-driving cars become available, they can be used to scurry around our neighborhoods, quickly accumulating even more data.

While a fascinating discovery, it will require a leap of faith and more validation for us to believe we are what we drive.