**New ML Methods Unlock Key to Affordable Housing Reform**

Dec 2nd, 2020 - Last week, the Urban Institute released a new national dataset on building heights. The original methodology for creating the building height data was designed by a group of Hackathon participants at the annual AWS re:Invent Summit In Las Vegas. They built an innovative machine learning approach that uses input satellite data to ‘predict’ building footprints and building heights. Using their methodology, the Urban Institute replicated the analysis for the entire United States and released it on their Open Data portal, where anyone can access the data for free.

Over the last week, there has been a sharp uptick in the number of cities that have released detailed affordable housing plans using the newly released building data. These plans pave the way for cities to support low and medium income residents in the face of rapidly rising rents and displacement. Usually these reports are very slow to come out and take lots of time to produce. But according to Rob Velazquez, a city planner for the city of Memphis, “The open source building height data has changed the game. We now have the foundational data needed to create accurate affordable housing roadmaps. We know now where affordable housing projects are viable and where they aren’t. What used to be a process of mostly guesswork is now an accurate data driven enterprise!”

Previously, cities just didn’t have a good sense of what kind of buildings there were in a city. And while some of the largest cities like New York could afford to commission a building footprint and building height dataset, smaller cities and rural jurisdictions simply did not have the resources. The open source building heights dataset truly democratizes data access and allows anyone to participate in the conversation around housing equity and affordability.

More impressively, since the underlying methodology is based on frequently updated satellite data, Urban researchers estimate they can update the building height data once a year. This unlocks the possibility for real time warning systems for displacement and gentrification that identify rapidly changing neighborhoods. The Petworth Neighborhood Association in Washington DC for example gushed at the potential for “real time data on neighborhood change and building growth. While we’ve heard anecdotal reports about new buildings being built and residents being pushed, we haven’t had a way to quantify this displacement until now. This data will give us the power to advocate for more inclusive zoning policies and affordable housing regulations that protect our long term residents.”