**New ML Methods Unlock Key Data for Affordable Housing Reform**

Dec 2nd 2020 – Shirley Green has lived in the same rowhouse in the Petworth neighborhood of Washington DC for the last 40 years. She and her children attended the same schools, played in the same playgrounds, and ate at the same restaurants. But this year, her rent has skyrocketed and she may have to move out of her childhood home. Facing the looming threat of displacement, she and her fellow neighbors formed the Petworth Neighborhood Association to advocate for more protections for long term residents. Using newly released public building data from the Urban Institute, the Association advocated for and successfully won more affordable housing production and inclusive zoning policies. The Association explained that “While we had anecdotal reports of new condo development and displacement of existing residents, we previously couldn’t quantify this neighborhood change, compare across neighborhoods, and justify our demands to decision makers. Urban’s data gave us the power to effectively advocate for ourselves!”

The national building height dataset was released publicly last month by the Urban Institute. In conjunction with AWS Hackathon participants, they created a novel machine learning approach to generate building height data from input satellite data. Using this methodology, they calculated building heights for all cities in the United States and open sourced the resulting dataset. The dataset truly democratizes data access and allows anyone to participate in the conversation around planning for housing equity and affordability. Previously, cities surprisingly just didn’t have a good sense of what kind of buildings there were in their jurisdictions. And while some of the largest cities like New York could afford to commission a building height dataset, most other cities and rural jurisdictions simply did not have the resources or data expertise. This prevented cities from developing detailed affordable housing plans and made it difficult for residents to understand how their neighborhoods were changing. This new data changes all of that.

Over the past few months, there has been a sharp uptick in the number of cities that have released detailed affordable housing plans using Urban’s newly released building data. Usually these reports are a time intensive and costly undertaking for city planning departments. 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 and how to make investments in housing affordability at a regional scale. What used to be a process of mostly guesswork is now an accurate, efficient data driven enterprise!”

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 and provide this data for free on an ongoing basis. This unlocks the possibility for real time warning systems for displacement and gentrification that identify rapidly changing neighborhoods, like Petworth. And as Petworth residents have proven, this data can truly change lives for the better.