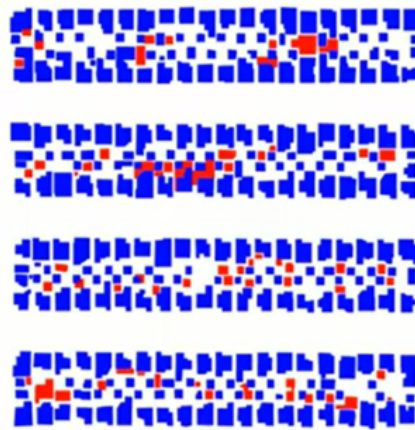
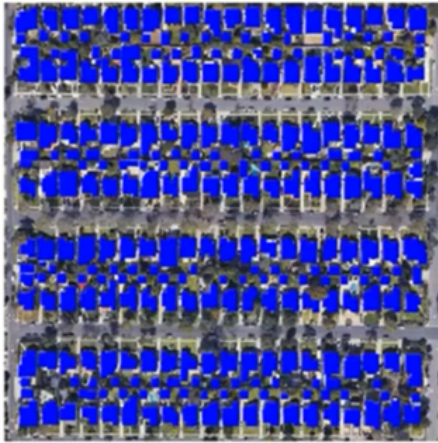
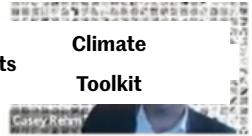


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December 16, 2021

Exploring Data-Driven Urbanism at the Chicago Architecture Biennial

"Data at the Crossroads," a panel at the Chicago Architecture Biennial brought data scientists, designers, and urbanists together to discuss how tech is reshaping our cities.

By: **Annie Howard**

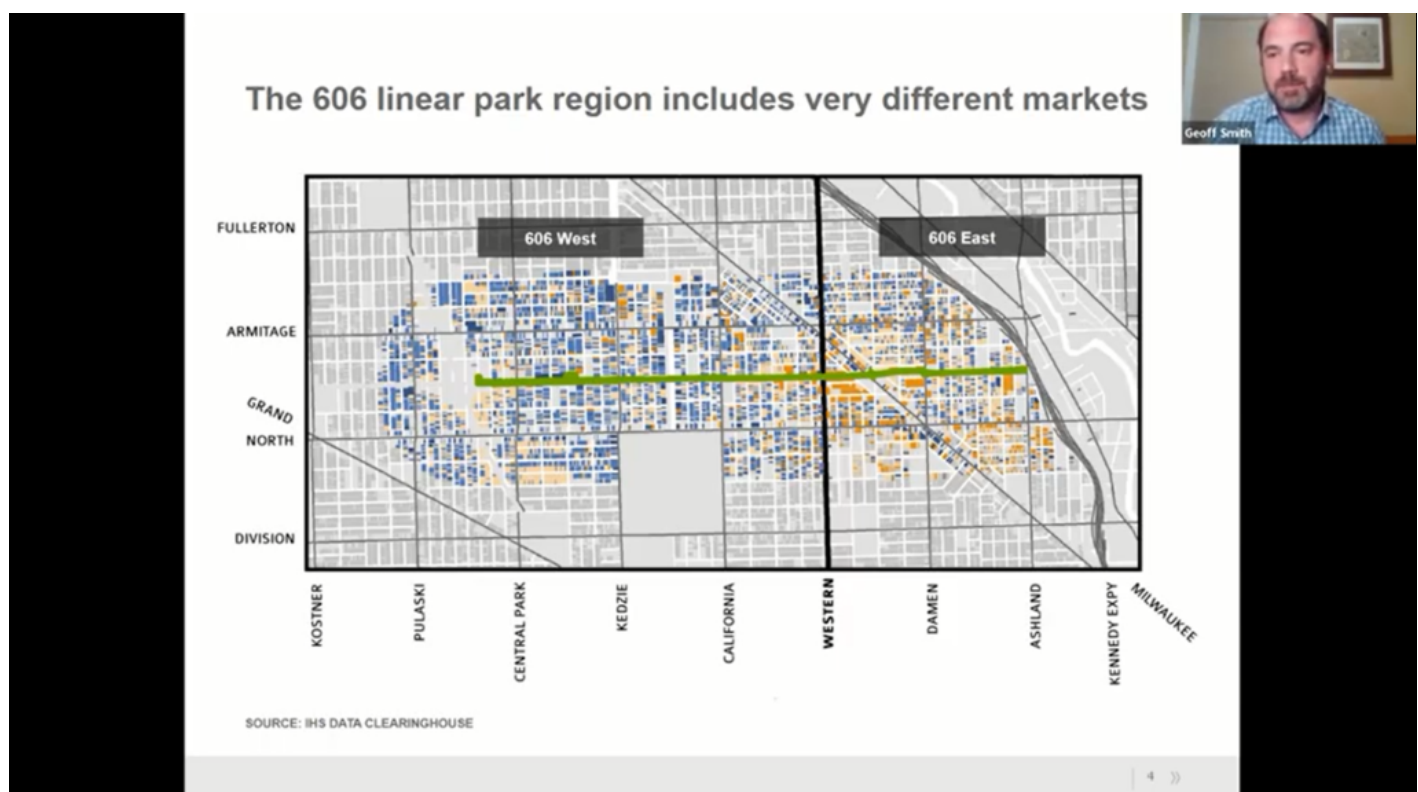


How can we see the cities we inhabit anew through the burgeoning lenses of speculative computation, artificial intelligence, and other modes of data-driven forecasting? As we observe digital tools increasingly shaping our material lives, is there enough room to step back and ask critical questions without losing track of where we started? These were some of the questions pondered at “Data at the Crossroads,” a talk convened on November 30th as part of the Chicago Architecture Biennial. Featuring panelists whose work ranges from mapping the future of speculative development to using machine learning to increase urban density, the event sought to draw connections between data and the material conditions of urban development.

The panel was hosted by critic, editor, and curator, **Mimi Zeiger**, and featured designer and algorithmic consultant M. Casey Rehm senior research associate at Southern California Institute of Architecture (SCI-Arc) Masha Hupalo, executive director of the Institute for Housing Studies at DePaul University Geoff Smith, and London-based designer and technology entrepreneur Ivo Tedbury. Zeiger, discussing her collaborations with Rehm, said the goal was to show how urban machine learning projects could improve accessibility “while being aware of the implicit biases that come with both systems of housing and systems of artificial intelligence.”

“Simulations and forecasting are all based on assumptions, and assumptions change.”

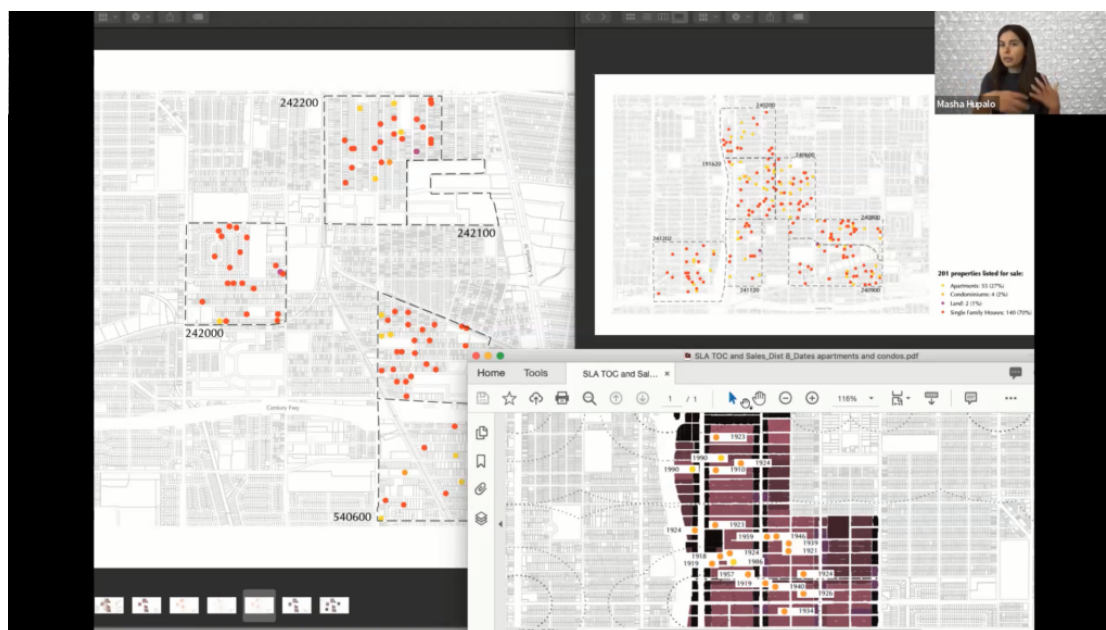
Geoff Smith, executive director of the Institute for Housing Studies at DePaul University



Geoff Smith presents “Mapping Displacement” during the discussion. COURTESY CHICAGO ARCHITECTURE BIENNIAL

“How might increasing ubiquitous technologies like neural networks recognize the impacts of gentrification, economic imbalances and historic justices like redlining?” Zeigler asked in her introduction. “Machine learning is indeed a construct: It’s not neutral, it’s not magical and it ultimately reflects the subjectivities that are built into datasets.”

Each of the panelists and their affiliates have in recent years developed projects which take advantage of improvements in advanced computing to understand our cities. Such advances, built on existing infrastructures and used to analyze already-prevalent trends like gentrification, nevertheless open up possibilities for as-yet-unrealized changes in urban space. For example, Rehm discussed student projects at SCI-Arc that used satellite imagery and machine learning to map potential sites for accessory dwelling unit and solar panel construction; Hupalo described research using platforms like Zillow and Redfin and their use in tracking speculative property sales in fast-gentrifying Los Angeles neighborhoods; and Tedbury highlighted **semblr**, a project he created to imagine robotics-assisted, creative construction projects using sustainable timber, creating flexible building structures that have been explored by U.K. council estates as a way of better using public spaces.

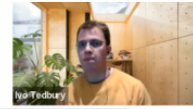


Masha Hupalo presents her research tracking speculative property sales using platforms like Redfin and Zillow. COURTESY CHICAGO ARCHITECTURE BIENNIAL

Smith, the panelist whose work is focused on the city of Chicago, examines the ways in which shifts in real estate markets help explain broader economic trends for the windy city’s neighborhoods. One recent report by the Institute for Housing Studies looked at the installation of the 606, an off-street elevated trail on a disused railroad track, and the ways in which it has fueled property speculation at its western end. Smith addressed the challenges in making significant assumptions about the future through simulation, noting how unpredictability has only grown greater in recent years, a crucial theme that resonated across many of the panelist’s research projects.

“Simulations and forecasting are all based on assumptions, and assumptions change,” Smith said.

“All sorts of unpredictable things happen in the world, so I think if you’re transparent about the assumptions built into your model, it can be an interesting exercise.”



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Ivo Tedbury presents semblr, a program for robotics-assisted construction, during the panel. COURTESY CHICAGO ARCHITECTURE BIENNIAL

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