



2021 Valuation Technology Conference

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I had the opportunity to attend the virtual IAAO-URISA Valuation Technology Conference March 22-26. In past years I have attended in person, and even presented representing GIS at BC Assessment. This year was different not only in that it was virtual due to COVID, but also in that the theme changed from "GIS-CAMA" to "Valuation Technology". A change in focus is required due to the nature of the technologies that are out there, and not all being GIS specific. Granted, Esri is still a major sponsor of this conference and has numerous technologies, but not all of them are geospatial.

One area that is growing in interest as the technology is becoming more mainstream is machine learning and AI. Many organizations are now embracing machine learning. Machine learning can be used in models as well as in image feature extraction and identification. In models, it was clear that machine learning can help by running multiple simulations and improving the accuracy of the model. It can also help by removing human bias. However, it was clear that when training the "machine" to learn, human participation is still required to validate initial results. For imagery, machine learning can be used to identify features such as buildings, driveways, pools and garages. Feature extraction can help quickly digitize, classify, and measure features on the ground with little to no human input. Although machine learning can seem complex, it is really just a process of iteration, simulation and similarity. Humans are required to train the machine, but eventually the results are predictable and accurate.

Another area of interest at the Conference was the use of dashboards. Many different technologies are available for data analysis using a dashboard, but Esri's Dashboards for ArcGIS Online or ArcGIS Enterprise were the highlight. One statistic mentioned was for the now well-known John Hopkins COVID-19 dashboard, which was quoted to have over 2 trillion (!) views. A few of those are certainly my own. ArcGIS Dashboards enable a quick overview of data, with charts, graphs and maps displayed up front. Many options to drill down or filter data, including geographically, are available. Overall these dashboards were shown to be a good way to review data and the results of data analysis in an interactive platform.

Geographically Weighted Regression (GWR) has been presented at this conference for many years, and is a data scientist's topic for sure. Using statistics software such as R, spatial aspects of a property can be used in models to determine the spatial heterogeneity of assessed areas ("different things will be comparable in different areas"). This basically means that using location in models helps to better define geographic market segments that may not follow geopolitical boundaries such as municipalities or neighbourhoods.

In summary, this conference is recommended to anyone that has an interest in the modern technologies that are used in real estate and property assessment throughout North America and the world. Presentations on leadership and innovation complement technical topics such as machine learning, modelling, and dashboards. Although this year was virtual and there are fewer opportunities to connect with other delegates, it does make it easier to attend and also discuss an ongoing seminar with a colleague that is attending with you without interrupting the presenters!