

## Representation Matters - Measuring Model-Market Representation, a Heuristic to Simplify AI Complexity

Whenever we use sales to measure assessment performance or to estimate value, there is an assumption that properties that sell adequately and proportionally represent unsold properties. This session presents two methods for examining this assumption, measuring the degree of generalization in a regression model, identifying properties that are not represented by sales and directly comparing performance for sold and unsold properties.



James Williams  
Mass Appraisal Supervisor  
City of Philadelphia Office of Property Assessment

Jimmy is the Mass Appraisal Supervisor with the Philadelphia Office of Property Assessment (OPA). He has been with OPA for over 27 years and has held several positions that include Clerical, Residential Assessor, Analyst and now Mass Appraisal Supervisor. His Education includes a bachelor's degree in business management, as well as a master's degree in real estate property Management. He is a Real Estate Investor/Developer and licensed Realtor in Pennsylvania with millions of dollars in transactions and is also a licensed Certified Pennsylvania Evaluator.

As a member of IAAO, Jimmy is a CAE candidate, 2017 U40 Leadership Lab Grant Award Winner and a Pennsylvania approved IAAO instructor.

Outside of Mass Appraisal work, Jimmy is a community activist who loves to travel, read books, talk about Bitcoin and spend an unreasonable amount of time scouring the internet for great memes.



Kevin Keene  
Owner  
Keene Mass Appraisal Consulting

Kevin Keene served the City of Philadelphia for over 30 years as a Real Property Evaluator; Mass Appraisal Analyst; Real Property Supervisor; Appeals, Customer Service and Exemptions Administrator; GIS Manager; Residential Administrator; Modeling Director and Director of Mass Appraisal and Analysis. He has personally designed and directed over sixteen major revaluation projects. He has trained appraisers, modelers and analysts, and has been a frequent presenter and facilitator at IAAO and URISA conferences.

In semi-retirement he is the principal at Keene Mass Appraisal Consulting ([keenemac.com](http://keenemac.com)), offering a variety of Mass Appraisal and educational services to clients around the world. His primary passions are promoting assessment equity, community activism and enjoying life with a loving wife and two adorable dogs.

Alex Raju  
Modeling Supervisor  
City of Philadelphia Office of Property Assessment  
No photo provided

Alex works with the City of Philadelphia - Office of Property Assessment. From training to data analytics, to data sciengineer, to modeling, to residential evaluation; he keeps seven of his fingers in various roles. Two he keeps reserved for new roles. One is left at home just in case. Alex has presented various topics: Big data analysis using Microsoft Power BI, Regression Modeling, Gradient Boosted Modeling, Introduction to Mass Appraisal, Ideas to Level Up Your Assessment Game: Leveraging Technology and Ideas for Better Outcomes, Measuring Representation in Sales Models and Ratio Studies - HMR Scoring using a Human Intelligence Heuristic, etc.