

This hands-on workshop introduces and exploits “big data” tools, computation, and predictive methods for valuation. It emphasizes **applied solution-based learning**, using real data, for objective evidence-based results. Data science results are simpler, more useful, and intuitively sensible.

The intent of this seminar is that students leave with these immediately useful skills:

1. Apply **visual methods** to structure assignments and define competitive market segments.
2. Classify and technically quantify *comparable data selection*.
3. Adjust and interpolate, using **contrasting** and **simple regression** calculations.
4. Explain practical differences in **calculated, estimated, and biased** adjustment estimators.
5. Hear and learn of the *complexities, pitfalls, hype, and flim-flam* around **multiple regression**.
6. See the potential of **real data analysis software**, such as open-source R and RStudio.

Open-source analytics software is provided, as well as example data sets and templates for use in form and narrative reporting. The use of these tools is particularly useful for **sparse-data appraisal problems** through the support of location (spatial), and price indexing (time) adjustments. Local commercial and/or residential data sets are used in presented examples

This course is prerequisite to intermediate and advanced courses offered by Valuometrics.info education, leading to auditable valuation practices.

George Dell, MAI, SRA, ASA, CRE, CDEI and *Valuometrics.info*

George Dell is a well-known author and innovator of the *Data Science* paradigm of valuation. He has presented at AI, ASA, and IRWA national and regional conferences on numerous related topics.

Recent and upcoming presentations include:

- 2019 AI SoCal Chapter Litigation Seminar: **Challenging Statistics in Law**
- 2018 AppraiserFest: **Fallacies, Fun, and Future of Valuation**
- 2018 Greater Tennessee Chapter of the Appraisal Institute: **Fallacies, Foibles, and Fun of Appraisal!**
- 2017 AI Seattle Fall Conference : **Evidence Based Valuation: “A New Valuation Modeling Paradigm”**
- 2017 AI Northern Ca Chapter Residential Symposium: **Hype vs. Reality: Adjustments and Comps**
- 2017 (June 10) – National AI / AI Canada: **Common Regression Errors and Mistakes**
- 2016 – ASA International Boca Raton: **Auditability vs. Reviewability: A Data Science Shift**
- 2015 – AI National Dallas: **Beyond Statistics, New Tools for Appraisers**
- 2015 – AI National Dallas: **Will appraisers have to learn to use a real data analysis package?**
- 2015 – ASA International Las Vegas: **Data Science, Junk Science, and Old Statistics**
- 2015 – AI Sacramento Chapter: **Introduction to Data Science**
- 2014 – AI Nat'l Austin & ASA International Savannah : **Appraisal Standards in a Data Science World**
- 2014 – AI SoCal Chapter: **Appraiser vs. Economist in Litigation**
- 2014 – AI NorCal Chapter: **Data Trends and Data Science: Statistical Methods**

The two-day **Stats, Graphs, and Data Science** course has been hosted by AI chapters and others in over 20 states: Hawaii, Alaska, Nevada, Los Angeles, San Diego, Philadelphia, Arizona, Boston, Northern CA, Las Vegas, Reno, Utah, Sacramento, Idaho, Washington, New Mexico, Florida, Michigan, Illinois, Virginia, Houston, Oregon.

In 2011, George received the Appraisal Journal’s Outstanding Service Award. In 2010 the AI President’s Award for the manuscript, **Auditability of Valuation: A Professional Solution to World Needs**.

He is an active reviewer for *The Appraisal Journal*, and a statistics workgroup member. He writes a weekly blog, and subscription reports: **TAAR**: The Asset Analyst Report, and **CIAR**: Collateral-Investor Assay Reporter. Topics focus on evidence-based valuation methods resulting in reproducible/auditable valuation risk reports.

He co-authored the Appraisal Institute book *Appraisal Valuation Modeling*. Three peer-reviewed articles have been published in the *Appraisal Journal*, emphasizing modern valuation/risk analytic delivery

He has served in numerous national, regional, and chapter positions, including national board of directors, curriculum committee, technology, admissions, peer review, and admissions project chair and teams. He is an approved instructor of the AI and ASA for courses and seminars, and an AQB certified USPAP instructor.

For more information see <http://valuometrics.info>, or the blog at <http://georgedell.com>.