USC School of Cinematic Arts

DIVISION OF MEDIA ARTS + PRACTICE
Virginia Kuhn, PhD
vkuhn @cinema.usc.edu

IML502: Techniques of Information Visualization
Spring, 2018 | 4 units
Wednesdays, 1-3:50pm, SCI 209
TA: Triton Mobley, tmobley@usc.edu

Professor: Virginia Kuhn, PhD
vkuhn@cinema.usc.edu
Office SCI 101N
Course wiki:
https://mapwiki.sca.usc.edu/wiki

Course Description
In 1945 Vannevar Bush decried the deleterious effect of information overload and poor data management, noting that Mendel's groundbreaking work on genetics was lost to the world for a generation because it was not accessible to those who might expand upon it. More than half a century later, the situation has increased exponentially: Contemporary culture is characterized by information overload, data deluge and an awareness of the systems complexity of a globally networked world. As such it is no surprise that the visual display of information has exploded as a means of representing vast datasets.

Infographics and three-dimensional simulations join conventional pie charts and bar graphs as numerous consumer level tools for creating these visualizations have emerged over the last few years. Critical engagement with these images, with their underlying data structures, and with the tools that produce them will form the basis of this course, as we move through the interpretation and production of information visualizations in various forms.

Texts:
Required: The Wall Street Journal Guide to Information Graphics (Donna Wong), available at the USC Bookstore or Amazon
Recommended: Universal Principles of Design (William Lidwell, Kritina Holden, Jill Butler) 2010 Rockport P. (pdf posted on class wiki)
Other readings available on course wiki including excerpts from *Alfred Crosby's The Measure of Reality: Quantification and Western Society, 1250-1600*

Grading Breakdown

Reading responses	15%
Software exercises (2)	15%
Project I: Comparative Viz	25%
Final Project: Prototype	25%

Peer Review	10%
Presentation (open topic)	10%

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Weekly schedule: subject to change as necessary to improve the course. Please refer to the weekly schedule in the class wiki, which will always be kept current.

JAN

1/10: Introduction, course overview. Screening of *All Watched Over by machines of Loving Grace, episode 2, The Use and Abuse of Vegetational Concepts*. Enroll in course wiki. For next time, please prepare introductory prompt, set up a landing page in the course wiki and read "Bomb Parts," from Weapons of Math Destruction.

1/17:). Models and Metaphors. How do models cull data? How does one judge the veracity of Introductory Infographics presented (as time permits). For next time, please read *The Measure of Reality* chapters 1, 5, 7 and listen to the *Under the Skin* podcast, episode 33 with Kehinde Andrews, "Is Trump Better for Black America than Obama?"

1/24: A History of Quantification: Structures of Data Society. Reading discussion. For next time, please read *WSJ's Guide to Info Graphics*, Chapters 1 and 2. Get a Tableau account from here < tableau.com/student> and view one training video from the Tableau site: https://www.tableau.com/learn)

FEB

2/7: From data to information. First project assigned. Tableau workshop. For next time, please read *The Information*, Chapter 4, "To Throw the Powers of Thought into Wheel-Work," and *The History of the Scatter Plot*.

2/14: Culling data. Tutorials and tool overview. For next time, please read the *WSJ's Guide to Info Graphics*, chapters 3, 4 and 5.

2/21: Good and bad practices. Sign up for presentation (weeks 12-14). For next time, please read Ch 1 of *The Secret Language of Color*, and "Color and Information," (Tufte).

2/28: The impact of color and font. Vision, machine and human. First project due. Structured peer review assigned.

MAR

3/7: Sensory data: computer vision. Structured peer review due on course wiki. For next time, please read Johanna Drucker's "Humanities Approaches to Graphical Display," *DHQ,* 2012.

3/14: Exceptions and outliers. Final project assigned and discussed. For next time, read "Data Not Seen: The use and shortcomings of social media metrics," by Nancy Baym in *First Monday*: http://firstmonday.org/ojs/index.php/fm/article/view/4873/3752

3/21: Collective wisdom and statistical evidence. For next time, please read "Coping with the Big Data Dump: Towards a Framework for Enhanced Information Representation," (Kratky, et al) *First Monday*: http://firstmonday.org/ojs/index.php/fm/article/view/5507/4574

3/28: Presentations. Workshop final project plans.

APR

4/4: Presentations cont'd.

4/11: Workshops and catch up work.

4/18: Workshops cont'd.

4/25: Last Class: Course evaluations, project updates.

Final May 2, 2-4pm. Final project presentations. Any revised work due on the wiki.