Data Visualization: Interactions that speed discovery

Xan Gregg, JMP Development



Scope

Data Visualization

Graphical representation of data that leverages our visual perception system for better understanding.

Not: tables of text

Interaction

User action that causes a near-immediate change to the data representation.

Not: data transformation, animation, programming

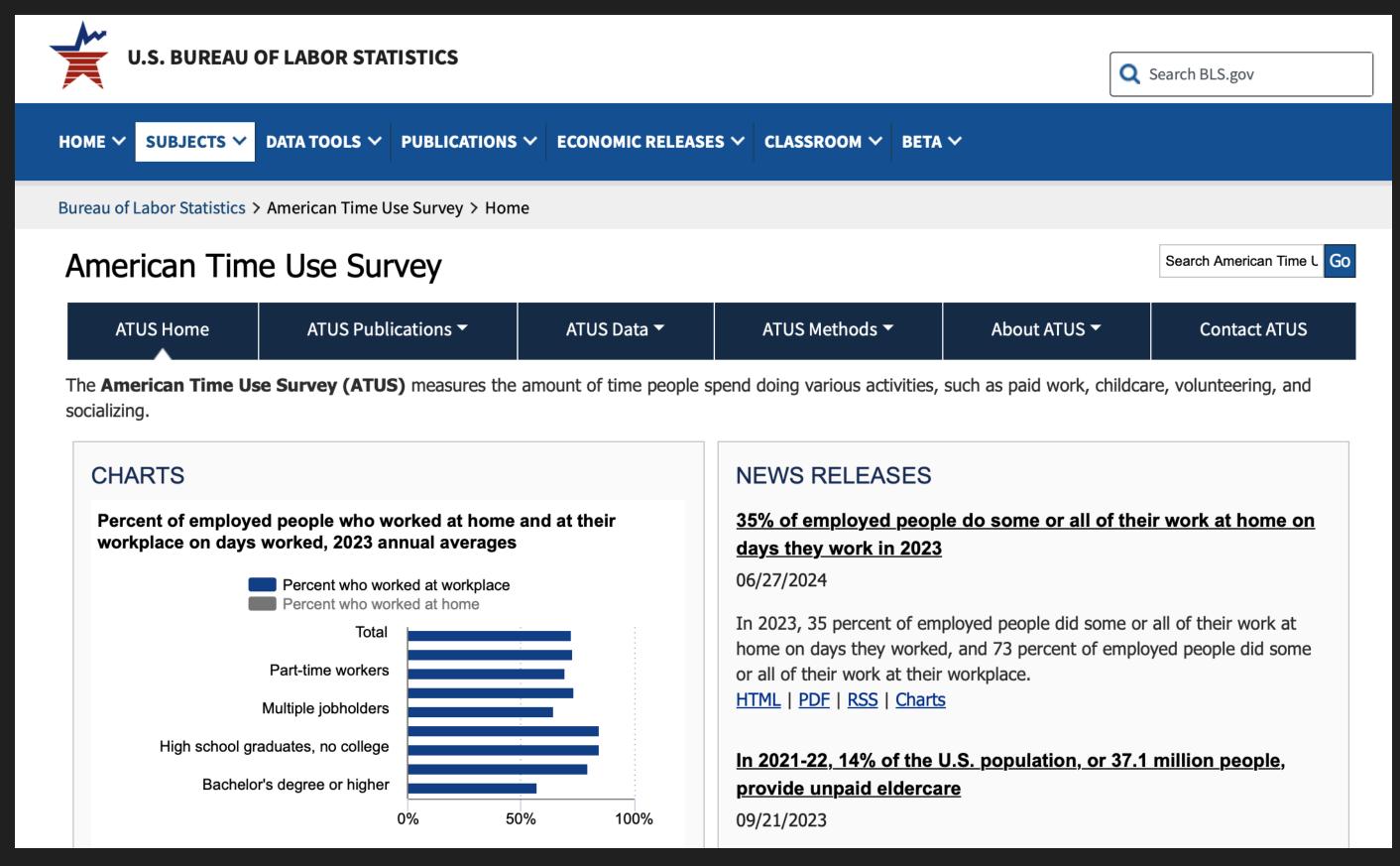


References

- Interactive Data Visualization: Foundations, Techniques, and Applications
 - 2010, 2015 book
 - Matthew O. Ward, Georges Grinstein, Daniel Keim
- Interactive dynamics for visual analysis
 - 2012 paper, Communications of the ACM
 - Jeffrey Heer, Ben Shneiderman
- Methods of interactive data visualization
 - 2019 blog post/JSM presentation
 - Xan Gregg



BLS American Time Use Survey





Reconfiguring variables, chart type, ordering

Filtering local filtering, selection filtering

Selection/Connection linked row selection

Navigation axis zoom, pan, stretch, projection

Encoding visual properties, color mapping

Elaborating hover details, drilldown



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summary statistics, model parameters



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Statistical tuning summary statistics, model parameters

Grand tour column switching, model profiling



