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Lesson 3
Core Skills for Visual Analytics

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What will you learn from this lesson?

- Different types of interaction techniques
- The role of Interaction in visual analytics
- The concept of linked multiple views
- Interactive analytics best practices
- Principles for animation and a taxonomy of transition types
- Design consideration for animated data visualisation

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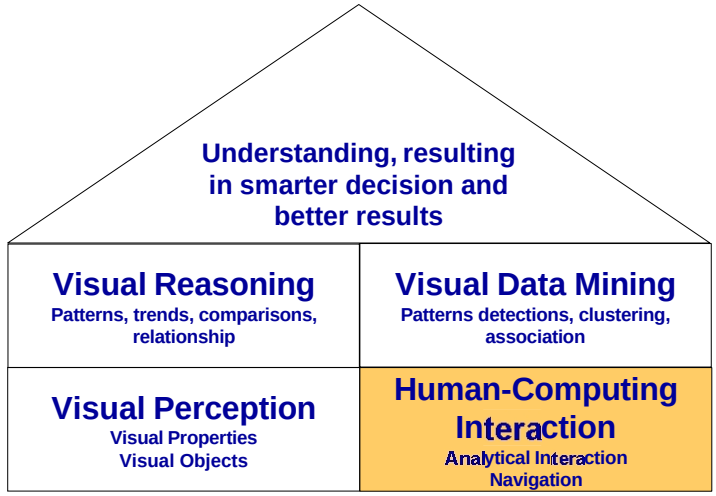
Visual Analytics Skills

- Simplify - good data visualization captures the essence of data - without oversimplifying.
- Compare - we can't hold the details of our data visualizations in our memory - shift the burden of effort to our eyes.
- Attend - the tool needs to make it easy for us to attend to the data that's really important.
- Explore – a visualization tools not just to answer a specific question, but to explore data and discover things.

Visual Analytics Skills

- View Diversely - to be able to look at the same data from different perspectives at the same time and see how they fit together.
- Ask why - more than knowing "what's happening", we need to know "why it's happening".
- Be skeptical - to ask more questions, as fast as we can think of them.
- Respond - to share our data that leads to global enlightenment.

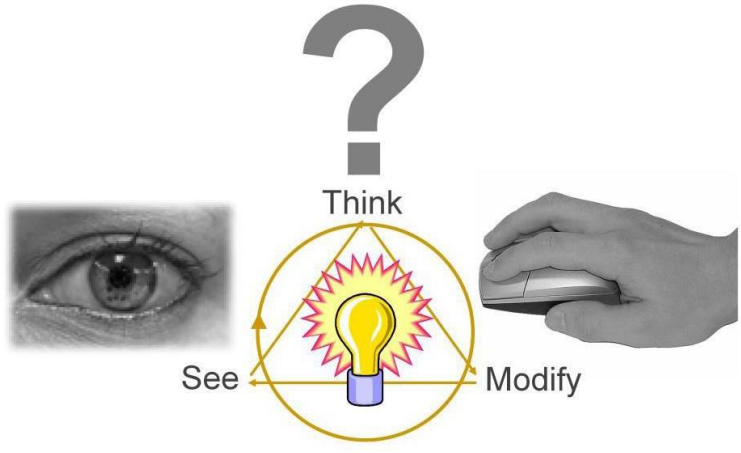
Building Block of Visual Analytics



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Visual Analytics Framework



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Interactive Analytical Best Practices

- Shneiderman's mantra:

**"Overview first,
zoom and filter,
then details-on-demand"**

7 General Categories of Interaction Techniques

- *Select:* mark something as interesting
- *Explore:* show me something else
- *Reconfigure:* show me a different arrangement
- *Encode:* show me a different representation
- *t/Elaborate:* show me more or less detail
- *Filter*: show me something conditionally
- *Connect*: show me related items

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