TAMIDS Data Science Competition
-2022-

Department of Statistics
Texas A&M University

Dr. Darren Homrighausen
Midpoint Prizes

What Makes a Good Visualization?
Optional Dates

Submit one page graphic: March 19, 2022 by 11:59 PM
(Use the competition Canvas site to submit, one submission per team)

Midpoint event: March 22, 2022, 6PM-7PM

Best Visualization:
1. $250
2. $250
3. $250

(Just to reiterate: this is optional)
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Outline

Midpoint Prizes

What Makes a Good Visualization?
History: Napoleon’s 1812 March to Moscow
History: 1854 Broad Street
What Makes a Good Visualization?

Though there is some subjectivity, there are also formal criteria. A great resource is ‘A Layered Grammar of Graphics’ (https://vita.had.co.nz/papers/layered-grammar.pdf)

- Data
- Variables
- Algebra
- Scales
- Statistics
- Geometry
- Coordinates
- Aesthetics
WHAT MAKES A GOOD VISUALIZATION?

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What Makes a Bad Visualization?
What Makes a Bad Visualization?
Another Example
What Makes a Good Visualization?

- **Data** (We have birth rates, death rates (both in %), and military spending)
- **Variables** (Select birth rates and death rates)
- **Algebra** (Multiply % by 10 to get per 1000 for better readability)
- **Scales** (Both are quantitative and on same scale)
- **Statistics** (Let’s add level sets of a kernel density estimate)
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Let’s look at this again…
What Makes a Good Visualization?

- **Data** (We have birth rates, death rates, military spending, population)
- **Variables** (Select all)
- **Algebra** (Multiply % by 10 to get per 1000, per-capita = military/population)
- **Scales** (Both are quantitative and on same scale, linear scale for per-capita)
- **Statistics** (Let’s add level sets of a kernel density estimate)
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![A scatter plot showing birth rates vs. death rates with military spending data points.](image-url)
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