TAMIDS DATA SCIENCE COMPETITION -2022-

Department of Statistics Texas A&M University

Dr. Darren Homrighausen

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MIDPOINT PRIZES

WHAT MAKES A GOOD VISUALIZATION?

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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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HISTORY: NAPOLEON'S 1812 MARCH TO MOSCOW



HISTORY: 1854 BROAD STREET



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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)

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- Data
- Variables
- Algebra
- Scales
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- Geometry
- Coordinates
- Aesthetics

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Another Example

- 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)
- Geometry (A scatter plot makes sense)
- Coordinates (Cartesian coordinates)
- Aesthetics (Add zero growth line, labels (per 1000), title, font)



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Let's look at this again...

- 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)
- Geometry (A scatter plot makes sense, *size points for per-capita*)
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Good Luck!