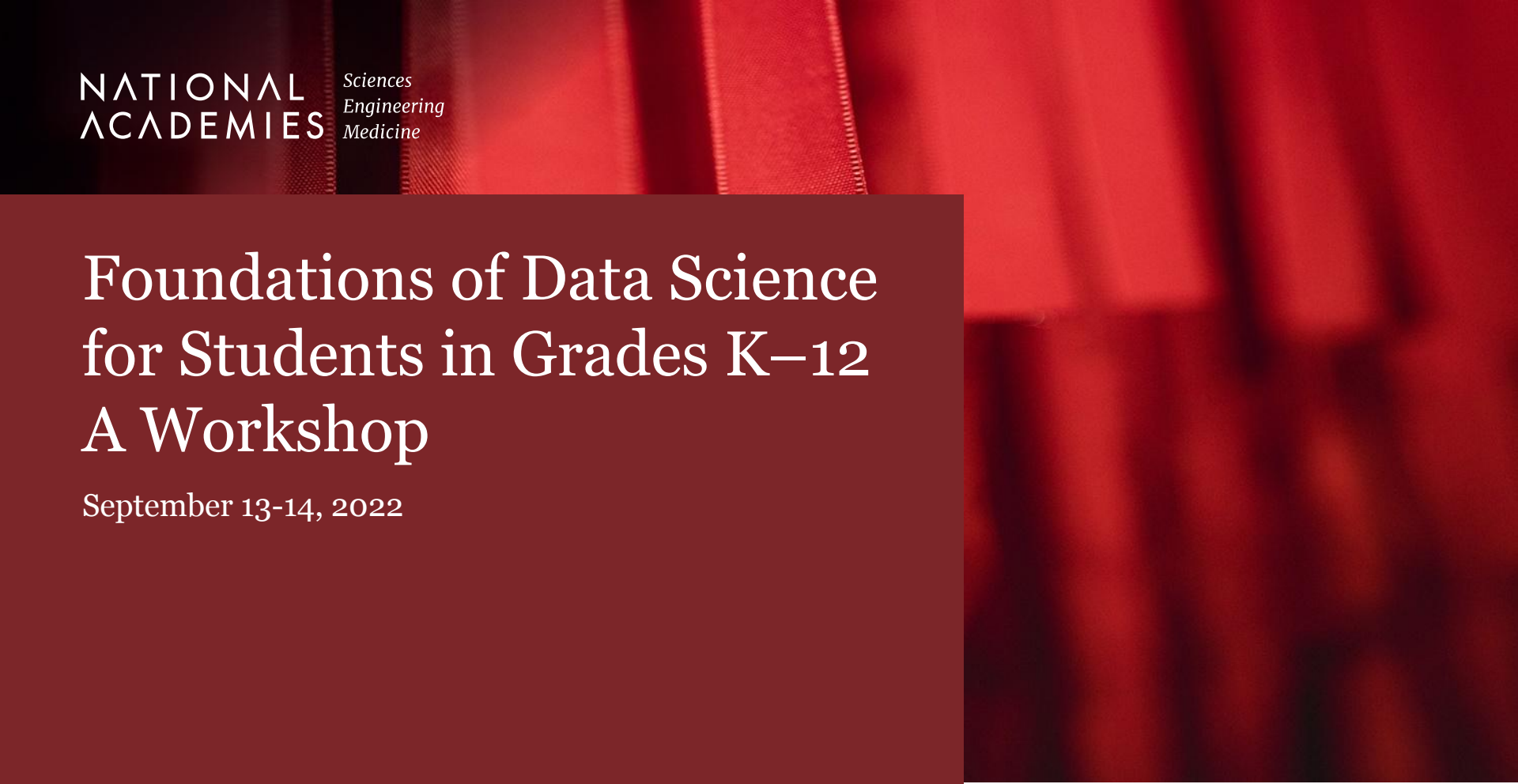

Foundations of Data Science for Students in Grades K–12 A Workshop

September 13-14, 2022

SEPTEMBER 2022

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Desired Outcomes for K-12 Data Science Education

We are asking for you to reflect on what should be the desired outcomes for data science education at the K-12 level. You are welcome to consider outcomes for different levels of the system. For example:

- Student-level outcomes: development of specific skills and proficiencies, developing interest or disciplinary identity
- Policy and practice outcomes: access to opportunities, funding, educator preparation and professional development

Find your group slide and enter in your ideas.
They need not be polished; notes are okay.

Group 1

Identify desired outcomes below.

- In general in **every subject area** students should be able to explain why they are studying this subject and how it can fit into their lives. The answer “because it’s on the final” is not acceptable. If the student can’t explain this, should they really be studying this subject?
- Students should be able to parse through large sets of data and be able to organize it in a meaningful way (e.g., graph, data visual, description). Then, they should be able to present the data in a way that answers a clear statistical question (or data question) so not only they can answer it but others could create the answer by studying the data visual. Most of the time, the person who created the data visual isn’t there to explain it. It should be self-explanatory in a way others can gain knowledge about the question.
- In a country where journalists don’t know the difference between percentage and percentage points students should learn to question authoritative claims and determine on their own whether what they’re hearing makes sense. “~~Trust~~ but verify.”
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This is a slide from a talk I gave on Zoom on the future of education (which I'd be happy to give again if there's interest):

How should they learn it

Grade School:

- One room local schools
- No teacher – education ***manager***
- Students are given assignments based on their level
- Students work independently or in small groups
- Student mentors can be assigned to help
- Students learn ***useful*** skills

This is where **AI** can be valuable