Innovate, Collaborate, Educate:
Learning Beyond the Classroom for Future-Ready Families

Thursday, October 16 | 6-7:30 pm

FEDERAL WAY
PUBLIC SCHOOLS

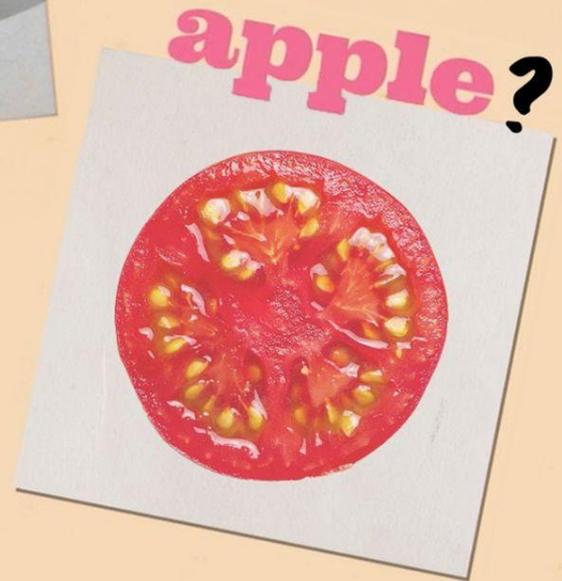FAMILY ACADEMY

Essential Question

How does AI bias occur?

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1 Define AI bias.

2 Understand how AI bias happens.

3 Reflect on ways to reduce AI bias.

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When computer scientists create AI, they use two different types of data: **training data** and **testing data** .

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Key Vocabulary

Training Data

the information given to an AI to help it learn how to do a specific task.

Key Vocabulary

Testing Data

the information used to check whether the AI that was created is reliable and accurate.

Imagine we're computer scientists and are in the process of **creating an AI app**. The purpose of the tool we're building is to **identify different types of fruits** . We have some training data to help us get started.

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Training Data

You use the images on the right to help **train** your AI.

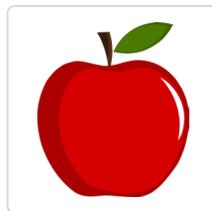- Based on the training data we have, what types of fruits might our AI be able to identify?

Orange

Apple

Apple

Apple

Grapes

Orange

Orange

Banana

Grapes

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FRUIT IDENTIFIER

Testing Data

The images on the right are the data you are using to check that the AI works as intended.

The labels under each image are what the AI thinks each fruit is called.
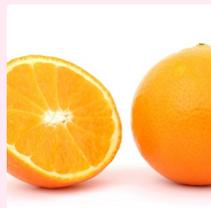

Apple

Grape

Orange

Grape

Apple

Orange

Apple

Orange

Banana

Testing Data

- Do you notice any mistakes?

- Why do you think the AI is making these mistakes?

Apple

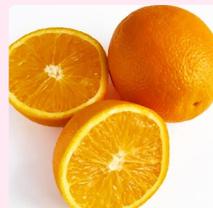Grape

Orange

Grape

Apple

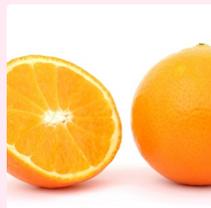Orange

Apple

Orange

Banana

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Key Vocabulary
AI Bias

when an AI tool makes a decision that is wrong or problematic because it learned from training data that didn't treat all people, places, and things accurately

In the **training data**, apples were the only example of a red fruit.

The **testing data** shows that the AI learned to identify anything red as an apple.

The AI we created has a bias toward thinking that every red fruit is an apple.

Training Data

Apple   Apple   Apple

Testing Data

Apple   Apple   Apple

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What are some ways we could reduce the AI bias of this fruit detector?

What are some ways we could reduce the AI bias of this fruit detector?

- Show it more **examples of things that are NOT fruits** so that it can become better at identifying what IS a fruit

- Show it more examples of **other kinds of fruits** (e.g. mangoes, kiwis, watermelons, grapefruits)

- Show it pictures of **fruits at different stages** (different size, ripe vs. unripe, etc.)

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While it's almost impossible to completely eliminate AI bias from a tool, we can do our best to reduce it by coming up with as diverse and complete a set of training data as possible.

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Imagine you're now asked to create an AI tool that can identify weather conditions, such as sunny, rainy, or cloudy.

Describe the kind of images you would include as a part of the **training data** . Your goal is to come up with as complete of a data set as possible so that you limit the chance for AI bias!

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- **Sky conditions**: blue skies, partly cloudy, mostly cloudy, overcast

- **Times of day**: sunrise, morning light, afternoon life, sunset, night

- **Seasons**: spring, summer, fall, winter

- **Geographic locations**: mountains, beach, desert, cities, rural towns,

- **Rarer occurrences**: rainbows, lightning, tornados, hurricanes,

- **Precipitation**: mist, drizzle, downpour, snow, sleet, hail

- What else?

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Remember that behind every AI tool are humans making decisions on what training data the tool will use. Understanding how AI bias occurs can help us think critically about its potential impacts.

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WE CAN THRIVE IN A DIGITAL WORLD.

Feedback Survey

Please help us improve by sharing your feedback about today's event through a 3-minute survey:

Encuesta posterior al evento: !Ayúdenos a mejorar!

Sau buổi sự kiện: Hãy giúp chúng tôi cải thiện!

Опрос мнения по окончании мероприятия: Помогите нам учесть недочёты!

پست-نظرسنجی : رویدادبه ما کمک می کند بهبود یابیم!

Scan the QR code or, Visit:
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Breakout 2 Workshops:

Stronger Together: A Family-School Approach to Bullying-Prevention
Room A204

Tech Habit Challenge, Part 1: What Roles Do Media and Tech Play in My Life? | Room A202

IEP Essentials: Navigating Special Education for Your Scholar's Success | Room A201

Guiding Your Scholar to Success: Making the Most of SLCs
Room B204