



Mountain View
Whisman
School District

Understanding the Impact of AI

January 25, 2024





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Link to SP2027

Clarity

- **Goal Area #1 Effective and consistent instructional practices that meet the needs of all students**
 - 1c. Develop programs to increase opportunities for underrepresented students to reach high levels of academic success.
 - 2. Fully develop MVWSD's Multi Tiered System of support to improve instruction, differentiate learning and align systems.
- **Goal Area #4 Effective and engaged employees**
 - 1b. Develop and consistently implement district-wide policies and practices that focus on retention, differentiation, and ongoing support.



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What is AI, and how could it applied to MVWSD

Artificial Intelligence (AI) in Media

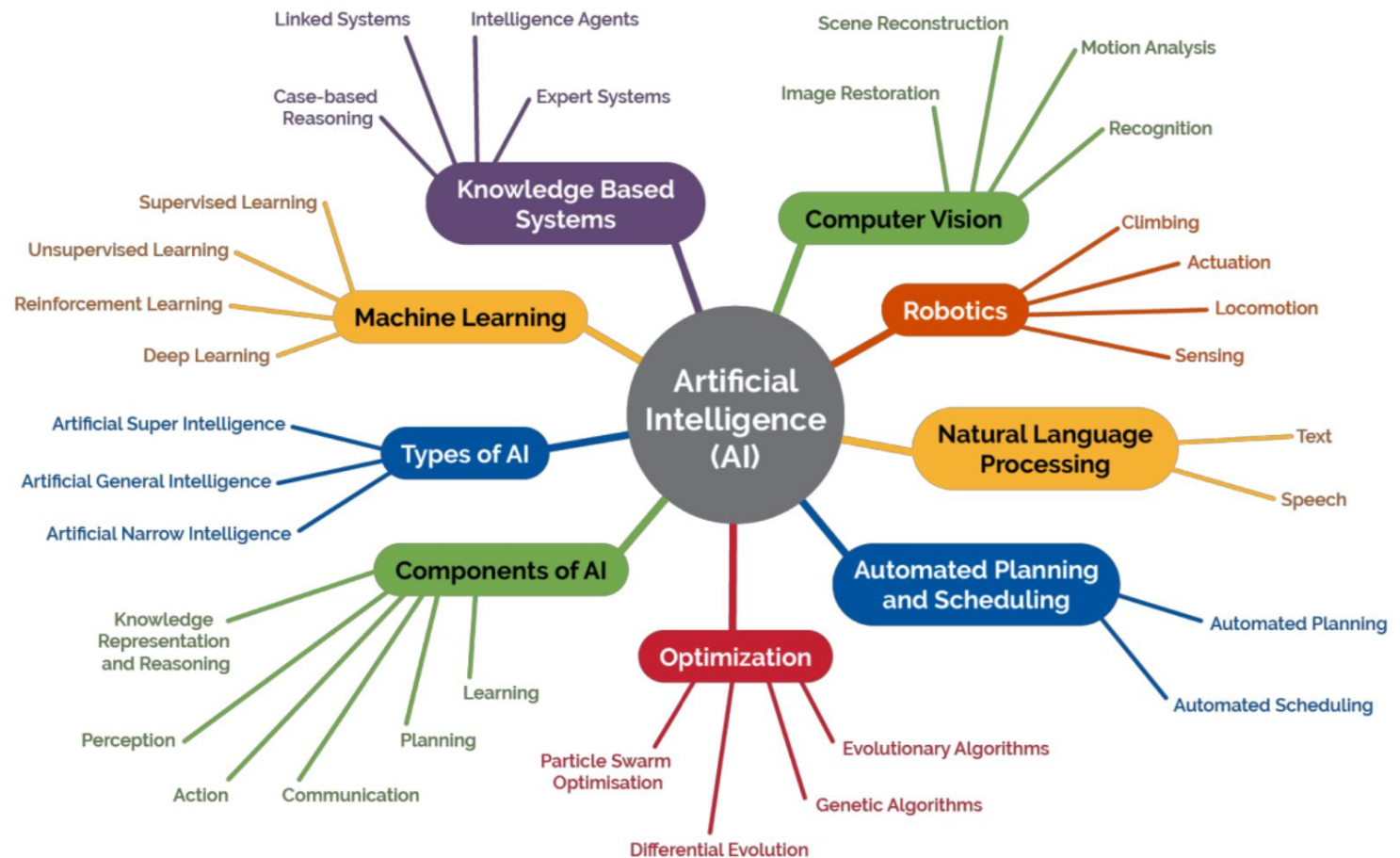


What is AI

- AI is a general term to describe a field of computer learning.
- Its origins are dated between 1950-56
 - originally measured by the Turing test to measure how “smart” a computer is
- According to the US Dept of Ed. AI “is not one thing but an umbrella term for a growing set of modeling capabilities”

What is AI con't...

Figure 3: Components, types, and subfields of AI based on Regona et al (2022).¹²




AI in real life

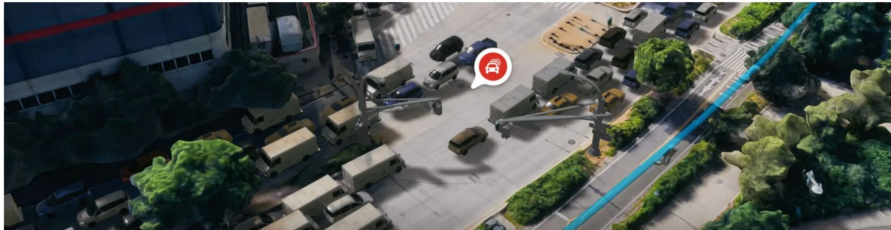
MAPS

New ways AI is making Maps more immersive

Immersive View for routes is coming to Maps, and there's new ways for developers to use Maps' immersive experiences.
May 10, 2023 · 3 min read

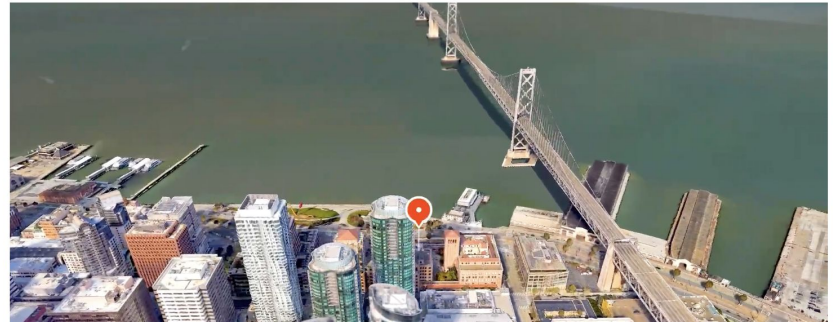
 **Miriam Daniel**
VP & GM, Google Maps

 Share



New ways for developers to build immersive experiences

We're also helping developers [build immersive experiences](#) in their apps and websites with Google Maps Platform. With our new Aerial View API, available today in preview, developers can easily integrate a 3D birds-eye video of a point of interest into their apps, offering people more visual information about a place. Rent is already using the Aerial View API to help renters visualize a property and its surrounding area so they can explore a neighborhood virtually and make more informed decisions about where to live.



AI in real life

- This isn't a question on whether our kids will eventually encounter AI; it is already something that is embedded in our everyday experiences.
 - AI is being used in everyday life, every field of study
 - To continue to aspire to meet the District's vision, which includes innovation, we need to make sure that all of our students have the opportunity to learn how AI works, its possibilities and limitations and how they can use it in their everyday life.

Understanding AI

- AI is a algorithmic model that uses massive amounts of data to identify patterns, make predictions and in some cases provide alternatives
 - Financial planners use these models for retirement planning
 - Google and Chatbots uses AI for predictive text

Growth in AI

- According to the US Dept of Ed. AI education is still in its early stages, with growth anticipated in the next 3-5 years
- According to ISTE, AI should not be relegated to only those students who have an interest in AI or computer science, instead we “should introduce AI early and often to all of our students”

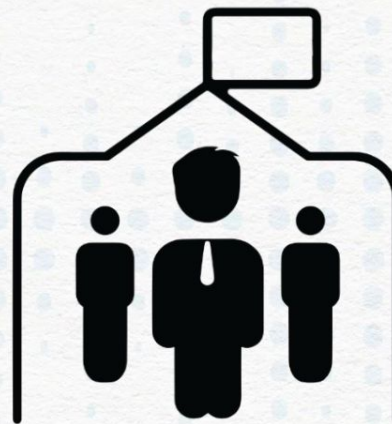
Figure 4. Differences that teachers and students may experience in future technologies.

	Familiar Technology Capabilities	Future Technology Capabilities
Input	• Typing	• Speaking
	• Clicking and dragging	• Drawing
	• Touching and gesturing	• Analyzing images and video
Processing	• Displaying information and tasks	• Assisting students and teachers
	• Sequencing learning activities	• Planning and adapting activities
	• Checking student work	• Revealing patterns in student work
Output	• Text	• Conversations
	• Graphics	• Annotating and highlighting
	• Multimedia	• Suggesting and recommending
	• Dashboards	• Organizing and guiding

AI and Machine Learning Jobs are Growing



AI or machine learning jobs will grow by 40%.



Over 1 million new jobs are expected by 2027.

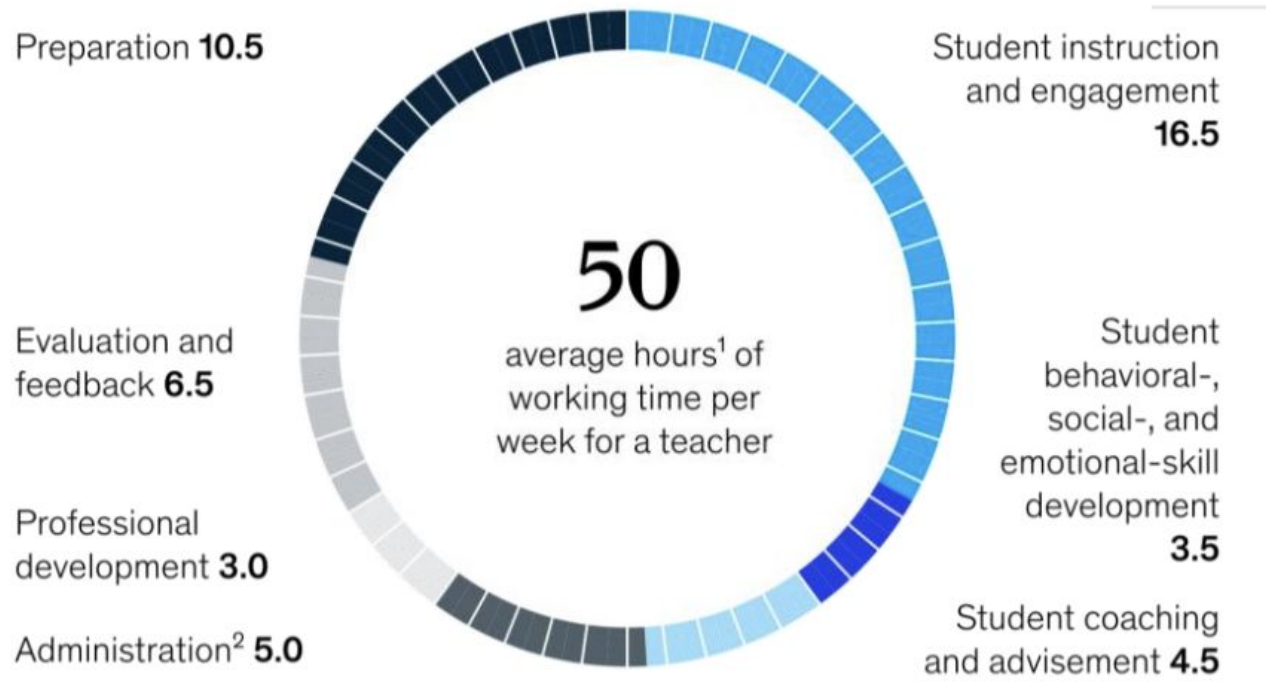
Source: World Economic Forum⁶

Ways that AI can be used

- Supporting student learning
 - feedback, selecting of assignments, prompts
- Data sleuthing
- Curriculum and lesson plan development
- Adapting instructional materials
- Assessments of student learning
- Professional development

Possible entry point (Goal 4 - Retention)

Activity composition of teacher working hours, number of hours



only

49%

of time is in
direct interaction
with students

¹Average for respondents in Canada, Singapore, United Kingdom, and United States.

²Includes a small "other" category.

Source: McKinsey Global Teacher and Student Survey

Possibilities to Assist Teachers

- Increase interactions with students
 - coaching, prompts, feedback, teasing out ideas
- Administrative tasks
 - Planning, grading, sourcing through materials
- AI could be used as a personal assistant
 - Microsoft is currently launching Shiksha copilot which is an AI-powered digital assistant that helps teachers with their needs by leveraging generative AI



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What's the Downside

Things to consider...

- AI cannot become HAL from 2001, meaning that while it can reduce certain burdens, it should not replace humans
 - i.e. A teacher can discern various reasons why a group of students are making a mistake that would not be captured in the Algorithm

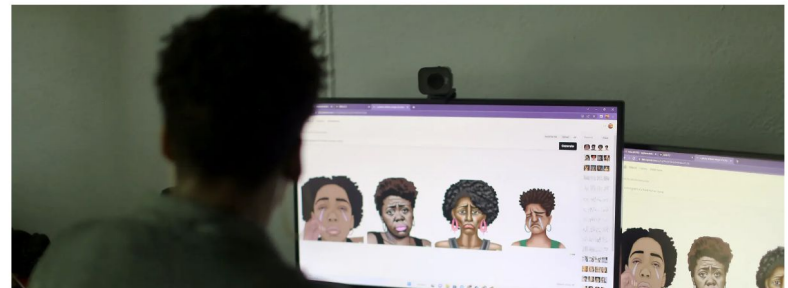
Things to think about

- AI is only as good as the model, or the data that it is sourcing information from
 - there are policy concerns around the use of data
 - privacy concerns
 - implicit bias exist, recently New York Times penned an article discussing how AI portrayed certain races

Black Artists Say A.I. Shows Bias, With Algorithms Erasing Their History

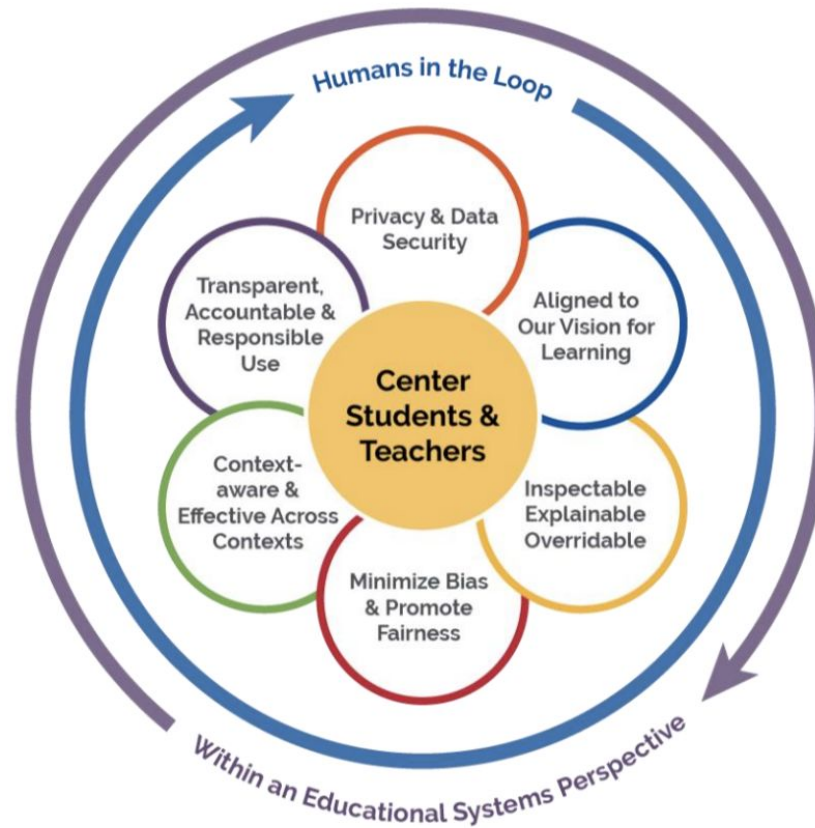
Tech companies acknowledge machine-learning algorithms can perpetuate discrimination and need improvement.

 Share full article  



Our Approach needs to be Student and Teacher centered...

Figure 14: Recommendation for desired qualities of AI tools and systems in education



Balance is the key...

Figure 8: The tension between human and AI decision making: Who is in control?

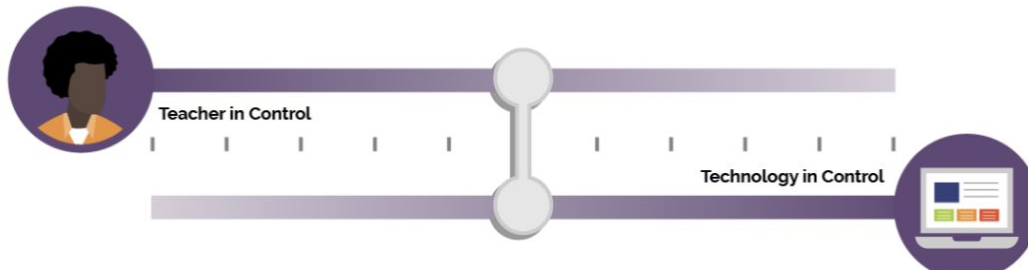


Figure 9: Highly customized assistance vs. increased teacher surveillance

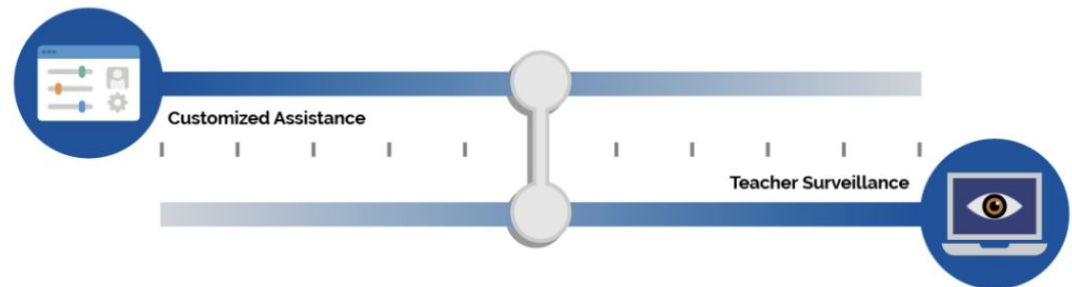
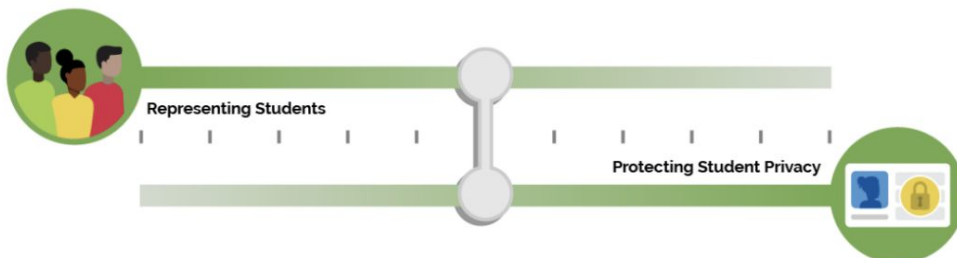


Figure 10: Responding to students' strengths while fully protecting student privacy





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Next Steps

As noted by the US Dept. of Ed.

The need is so broad, there's almost no wrong direction to go. There's a need for professional learning opportunities. There's a need for student resources. There's a need for the development of tools. There's a need for just the understanding of what AI is at a basic level.

Next Steps

- Look at feasibility of adopting a policy that aligns with the District's vision / mission and helps to further MVWSD goals
 - Consider California framework/best practices
- Create a small group of stakeholders who can serve as our “MVWSD AI explorers”
 - this group make recommendations
 - serve as our AI experts
 - build in house capacity