Job Skills in a World of AI

Teacher: Zaccariah Toaha	**Date**: 8/7/2025
Class Type: General, Elective	**Grade**: 9
Time Frame: One 46 minute lesson	

Lesson Overview
Unit/ Overarching Focus of Lesson: ● Job Skills in a World of AI
Objectives/Aims: Students will demonstrate understanding/learning around the following Big Ideas: ● AI Models to be effective need to be trained on large amounts of data. ● This understanding can guide us in understanding what careers will continue to exist in the future.
Aligned Standards (K-12 Computer Science and Digital Fluency Learning Standards) ● 9-12.IC.1 Evaluate the impact of computing technologies on equity, access, and influence in a global society.
Key Vocabulary and Concepts: ● Training Data, LLM
Materials & Resources: ● Handouts, Laptops
Safety Practices: ● N/A
Preparation for Teaching Diverse Students: ● Students will be given handouts. Larger print documents will be available for students who need it. Students with language differences may use their phones for translations.
Cultural context within which the lesson will be grounded, and specific ideas/practices to be included in the lesson: ● My students have a one day a week advisory lesson, where we learn about socio-emotional learning, college and career readiness and social justice. Prior to this lesson, we will discuss college majors and how students should consider their interest, starting salary, median salary, unemployment rate and underemployment rate when choosing a college major. In this lesson, we will discuss AI, and how that might change the subjects they wish to study or the jobs they wish to pursue.
Prior Knowledge: ● Students have regularly used AI in their everyday life. This knowledge will be leveraged in the Do Now.

Prior Lesson:	Followup Lesson:
● In a prior lesson about college and career readiness, students learned about the	● N/A

difference between the unemployment rate and the underemployment rate. They were taught about how important it is to consider both their interests and financial facts when choosing a career path	

Lesson Overview/ Abstract:

● *Students will be given a do now where they consider what jobs skills AI will make obsolete. The lesson will have students engage in a computer activity where they train an AI model and understand how the size of the training input of an AI model affects its performance. They should come to the conclusion that AI models perform better when it is fed more data. Students should understand how innovations by AI may be limited by what data we can collect. They should apply this idea to evaluate how different jobs are being impacted by AI.*

Lesson Activities			
Time	**Activity**	**Materials**	**Rationale**
10 minutes	**Do Now:** 1) Pick a job you can see yourself doing. Why do you see yourself doing it? 2) Based on what you know AI can do, what job skills do you believe may become obsolete and unnecessary? Why? Students will think-pair-share their answers to the above questions. I will circulate the room. **Anticipated Responses:** -Obsolete skills will include writing, reading, basic coding, drawing, etc. Students will reference popular AI tools that do those tasks for them. **Transition** I will tell students that today's lesson will be about understanding the limitations of AI. People think AI can do anything; but by the end of the lesson, we will have an idea of what AI cannot do. This should give students a better idea of how AI will transform their jobs.	Handout	-Have students draw on their prior experience with AI. -Have students pick a job they can see themselves doing so they can reflect on it throughout the lesson.
25 minutes	Students will take out their computers, and download folders off of Google Classroom. They will download two folders of training data:	(Same handout) Computers, students will visit https://teachable machine.withgoog	I have Zendaya and Charli D'Amelio images because ChatGPT picked those two when I asked for culturally relevant generation Z figures.

-Zendaya Images -Charli D'Amelio Images There will be a third folder of 4 test images, two of Zendaya and two of Charli D'Amelio. I will model for students how to use the Teachable Machine website to train the AI model, and how to then test the AI model. **Handout will have the following questions.** 1) Train a model with 5 pictures of Zendaya and 5 pictures of Charli D'Amelio. Of the 4 test images, how many does your model identify correctly? 2) Train a model with 40 pictures of Zendaya and 40 pictures of Charli D'Amelio (basically, all the images). Of the 4 test images, how many does your model identify correctly? 3) Why do you believe the AI model performed differently when uploading 5 pictures versus 40 pictures? **Discussion:** Students will think-pair-share the above questions. We will go over each question one by one. With the last question, students will hopefully conclude that when an AI model is trained on more data, it is better able to detect patterns and more accurately classify new data. **Transition** I will mention how AI can do a lot, but it's limited to what kind of data we can train it with. I will mention how it seems unlikely that we will be able to train AI models that do tasks that require fine motor skills (control of small muscles), because of how difficult it is to capture data on tasks that require fine motor skills. Because of this, jobs like being an electrician, plumber or surgeon are unlikely to be automated by AI. You can get a quadrillion words, and a billion photos. But how easy is it to get even 1000 surgeons? And 1000 probably isn't enough to make a reliable model that would be trusted to do actual surgery.	le.com/ to train AI model. le.com/ to train AI model.	Over the course of the year, I may change the figure based on survey results from my students. When playing with the Teachable Machine website, they will see how the more data an AI model is given, the better it performs. This will make it easier for students to understand and discuss how AI will be limited. They can then consider how AI will influence various job skills.

10 Minutes	**Future of Jobs Report** I will show students page 19 from the "World Economic Forum Future of Jobs Report 2025" https://reports.weforum.org/docs/WEF_Future_of_Jobs_Report_2025.pdf It has a list of the fastest growing and declining jobs because of AI. Students will be given that graph on their handouts and will be asked the following questions on the handout: **Handout will have the following questions:** 1) Pick a job from the list of fastest declining jobs. Explain what effect you believe AI has on this job. 2) Pick a job from the list of fastest growing jobs. Explain if you believe AI would help enhance this job, thus explaining its growth. 3) Consider your job from the Do Now. The job may not necessarily be replaced. But it may change drastically. How do you believe AI will change this job?	Same handout	Students will see examples of jobs that are growing/declining, and be able to explain it in terms of what they understand about AI.

Lesson Assessments
Follow-Up Assignment: ● Exit Ticket where students discuss the major ideas they learned in today's lesson.
Additional Accommodations for Students: ● Students will be given handouts, so they can focus on the content.
Methods of Assessment: ● Formative Assessments: ○ Google Form homework will include links and images visited throughout the lesson, and have a few multiple choice questions testing their understanding of the lesson. ● Summative Assessments: ○ N/A