Artificial Intelligence & AI-bots
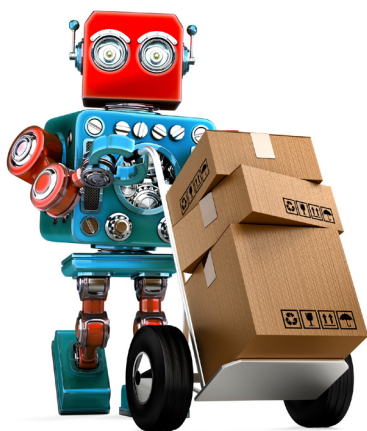
Artificial intelligence (called "AI") is the ability of a computer or robot (called AI-bot) to perform human actions. In the U.S., the first AI computer program was written in 1952 by Arthur Samuel to test the IBM 701 computer with a checkers game. Samuel added new programming that allowed the IBM computer to learn from past mistakes in playing checkers. Eventually, this first AI-bot won a checkers game against a Checkers Champion in 1962.

Today, artificial intelligence is used for many things:

1. Virtual assistants like Siri help you find useful information.
2. Video game characters learn your moves, then act in new ways you do not expect.
3. Smart cars, such as Google's self-driving car and Tesla's "autopilot," are close to being able to look at the road ahead, and make decisions based on what it sees, just like a human.
4. Retail stores such as Amazon and Target want to use AI to send correct items to customers, even before customers purchase the item online.
5. Banks use AI to approve credit card purchases to make sure it is you who used the card – and not thief.
6. Customer support may be a "chat support bot (robot)" that understands and answers your questions.
7. Simple news stories are now written by AI for Fox and Yahoo on sports, stock market, and real estate.
8. Artificial intelligence is used by apps like Spotify, Pandora, and Netflix to recommend music and movies based on choices you made in the past.

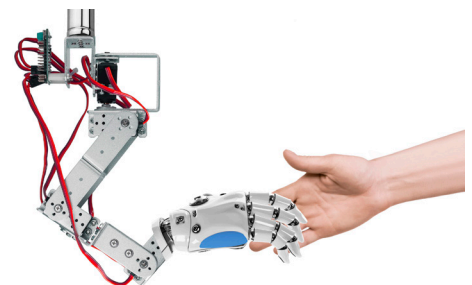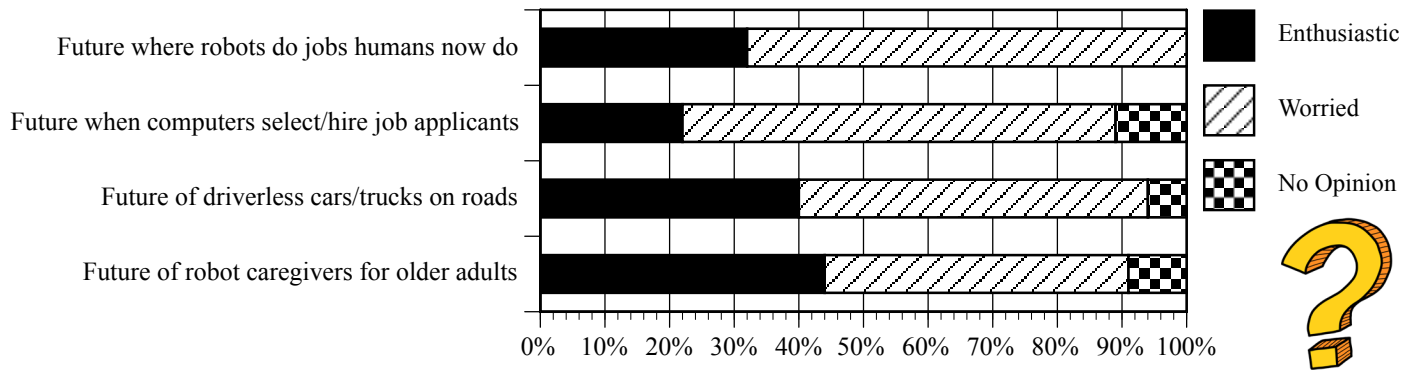**What is the result of AI in the work world?**

Is AI replacing workers? ATMs, PayPal, and smartphone banking have replaced many bank tellers. Ordering kiosks have replaced many cashiers in restaurants. Robots putting parts together have replaced many factory assembly workers. TurboTax software has replaced many income tax preparers.

Is AI helping workers? Experts say that AI will help workers do their jobs better — and workers will use AI like a coworker on the job. Robots help surgeons do more accurate surgery. AI helps farmers grow more food on each acre of land. AI helps technicians by taking better x-rays of a broker arm or sonograms of a baby in a mother's womb. AI-Bot"Flippy" helps cooks with prepping food, grilling, and frying.

What do Americans think about the changes AI-bot are causing?

1. 76% expect that the gap between rich and poor people will become worse if AI-bots are able to perform many jobs done by humans.
2. 75% expect that many new, better-paying jobs will be created for humans because of AI-bots.
3. 64% worry that people will have a hard time finding things to do with their lives if AI-bots do too many things that humans now do.

SURVEY QUESTION: How do you feel about AI-Bots — Enthusiastic (Happy) or Worried?

Future where robots do jobs humans now do

Future when computers select/hire job applicants

Future of driverless cars/trucks on roads

Future of robot caregivers for older adults

Enthusiastic

Worried

No Opinion

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

George Anders, Forbes Magazine writer, says the work world needs humans for 3 things AI-bots cannot do:
1) **Creativity** — think of new products and ways to do things.
2) **Curiosity** — think "why" questions; then answer the questions.
3) **Empathy** — understand, talk, and work with all types of people.

Mr. Anders believes that humans are becoming more valuable in "cognitive" (thinking) jobs — jobs that require thinking skills — and less valuable in "non-cognitive" (non-thinking) jobs — jobs where workers do not use thinking skills, but do the same things over and over. AI-bots can be invented to do non-thinking jobs. But, it is hard to invent AI-bots for thinking jobs — especially jobs that deal with people. **Al-bots cannot:** 1) Understand all types of people. 2) Understand people's body language and unspoken emotions. 3) Talk people into accepting an idea or action (such as buying a car).

In the future work world, employers will hire workers for thinking jobs — and buy AI-bots for non-thinking jobs. For a successful future, you need to **prove you are better than an AI-bot** by learning **thinking skills in creativity, curiosity, empathy** — and **how to understand and talk to people**.

QUICK CHECK:

1. For what do the initials "AI" stand?
2. What is an AI computer or robot called?
3. What did the first AI-bot do in 1962?
4. What do video game characters now do?
5. For what does Amazon want to use AI to do?
6. What do "chat support bots" do for companies?
7. List 3 types of simple news stories that may be written by AI for Fox and Yahoo.
8. How do apps like Spotify and Pandora use AI?
9. List 3 types of workers that AI is replacing.
10. List 3 types of workers that AI is helping.
11. In "What do Americans think about AI-bots" —
    a) Explain reason you agree or disagree with #1.
    b) Explain reason you agree or disagree with #2.
    c) Explain reason you agree or disagree with #3.
12. From Survey Question graph: What percent of people are **enthusiastic (happy)** about:
    a) Future where robots do jobs humans now do?
    b) Future when computers select job applicants?
    c) Future of robot caregivers for older adults?
13. List 3 things Mr. Anders says AI-bots cannot do.
14. a) Define "Creativity" b) Define "Curiosity"
    c) Define "Empathy"
15. a) What is another word for "cognitive"? b) In what jobs does Mr. Anders believe that humans are becoming more valuable?
16. a) What is another word for "non-cognitive"?
    b) In what jobs does Mr. Anders believe humans are becoming less valuable?
17. a) In dealing with people, list 3 things that AI-bots cannot do. b) Which of these 3 things can you do now?
18. a) In the future, for what jobs will employers hire workers? b) For what jobs will employers buy AI-bots?
19. For success, what do you need to prove — and what 4 things do you need to learn?