Radio Host: Welcome back. As I mentioned before the break, Roger Ali is with us today to talk about _____ Thank you for being here, Dr. Ali.

Roger Ali: Thank you for having me.

Radio Host: I'll be honest with you. When I hear the words "artificial intelligence," the first thing I think of is the _____ HAL from the movie *2001: A Space Odyssey*.

Roger Ali: Sure. Many people remember HAL. In the movie, he's the computer that _____ the systems of a _____. He also speaks with the people on the spacecraft.

Radio Host: And he's not very happy when the people decide to turn off the computer. In the movie, HAL becomes very _____.

Roger Ali: That's right, but fortunately, artificial intelligence in the *real* world isn't like HAL.

Radio Host: Well, that's good! Can you tell us what *is* happening in the field of AI?

Roger Ali: Many interesting things. For example, when we _____ for something on the Internet, the search results that we see are chosen carefully. The _____ has learned which websites are the most popular, the most reliable, and so on. This _____ us from seeing a lot of websites we're not really interested in.

Radio Host: In other words, the search engine _____ about what we're looking for on the Internet.

Roger Ali: Right, so it only shows us the information it thinks we want to see, which _____ advertisements as well. We usually see only ads for products that the computer thinks we might want to buy.

Radio Host: You said, "It *thinks*," but is the search engine *really* thinking?

Roger Ali: That depends on your definition of *thinking*. The search engine is _____ learning—*machine* learning—and it does have *knowledge*. Knowledge about the Internet. Are learning and knowledge part of your definition of thinking?

Radio Host: They're part of it, but human beings are capable of so much more. We have our _____—hearing, smell, sight, touch, taste—and our emotions. We notice a lot about the world, and we use our _____ to make decisions.

Roger Ali: That's true, and most computer scientists know that we can't replace human beings with computers. We don't intend to make robots for *every* kind of job, either. That's just not practical.

Radio Host: OK, but there are some jobs that robots *can* do.

Roger Ali: Yes, there are. I should probably explain this a little better. When we want a robot to do something, we need to _____ the robot in great detail. We enter information about what the robot is supposed to do in any situation. If we give the robot a _____, or if it finds itself in certain circumstances, it knows *exactly* what to do, because we *told* it what to do!

Radio Host: That doesn't sound like a very intelligent machine.

Roger Ali: It's not, but the latest idea behind machine learning, or artificial intelligence, is that machines might someday act more like the human brain. We're trying to go beyond the idea of telling the machine everything. We want the machine to be able to learn and to tell *us* something new.

Radio Host: That sounds interesting, but what are machines going to tell us that we don't already know?

Roger Ali: We're not sure, but we hope that AI can be used in the _____ field. Since computers can read a lot of information very quickly, they might be able to _____ things that people don't have time to discover. If we think about cancer, for example, it's a problem for doctors because it's really many _____—not just *one* disease. In addition, millions of people have had cancer, but doctors can't possibly know the facts about every one of those people.

Radio Host: But a computer could read all of that information and possibly see something that a human doctor couldn't see?

Roger Ali: That's our hope, but we're not there yet.

Radio Host: It's something for us to look forward to. Our guest today has been Roger Ali. Dr. Ali, thanks very much for joining us.

Roger Ali: It was my pleasure.