

Learner Activity Guide and Workbook

Introduction to Artificial Intelligence



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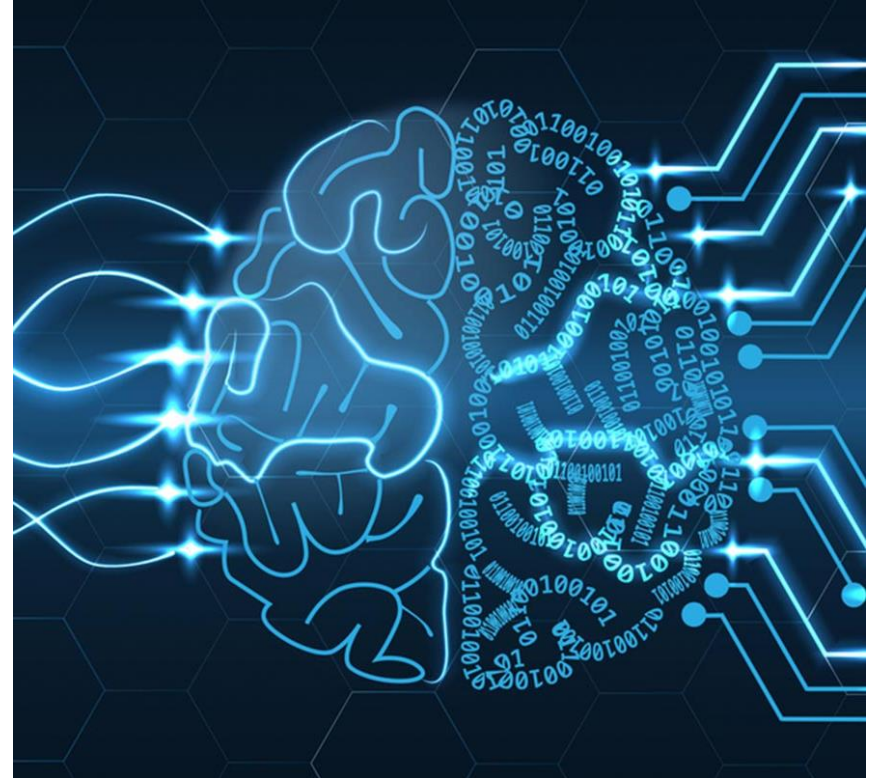
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Welcome to this course!

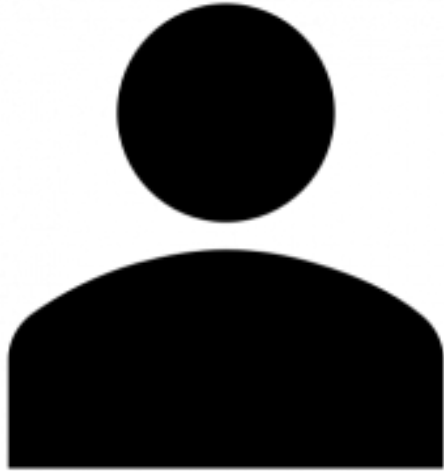
By the end of this course, you will be able to do the following:

- Define artificial intelligence (AI).
- Define concepts related to AI.
- Recognise instances where AI has been used.
- Explain how AI is used in the insurance industry.
- Apply your knowledge of AI to create new uses of AI to the insurance industry.

Let's begin!



Icons



Individual
Activity

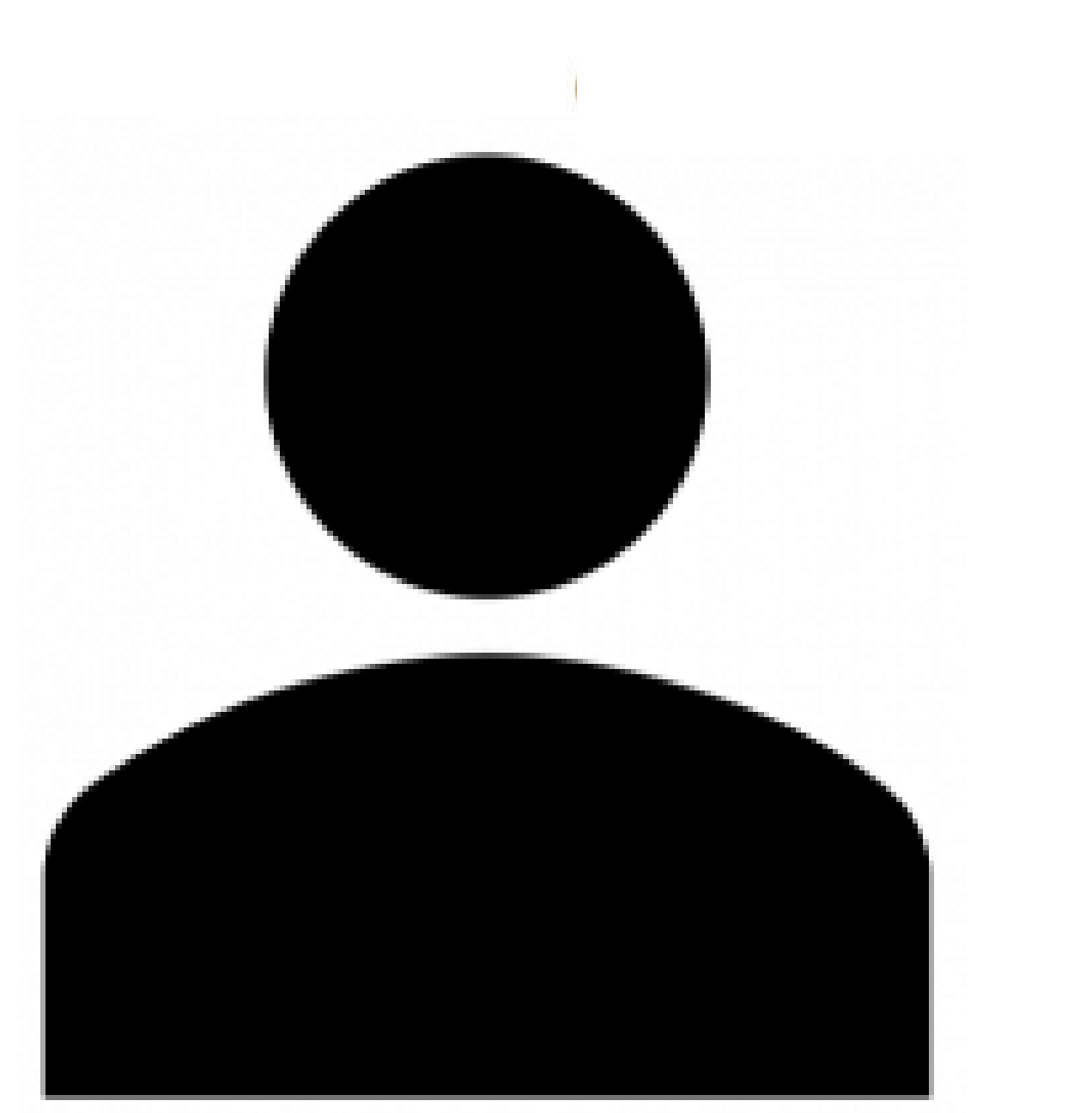


Group Activity

Activity 1

Pre-course Survey

Complete the survey on the next page to find out how much you already know about artificial intelligence.



Duration: 10 minutes

Activity 1 Pre-course Survey

1. Do you know what AI (artificial intelligence) is?

Yes

No

2. What is your first thought when you think about AI?

3. How do you think AI can be used in the insurance industry?

4. What are some of the advantages of using AI?

5. Do you think that AI could be dangerous? If so, why?

Yes

No

Activity 2

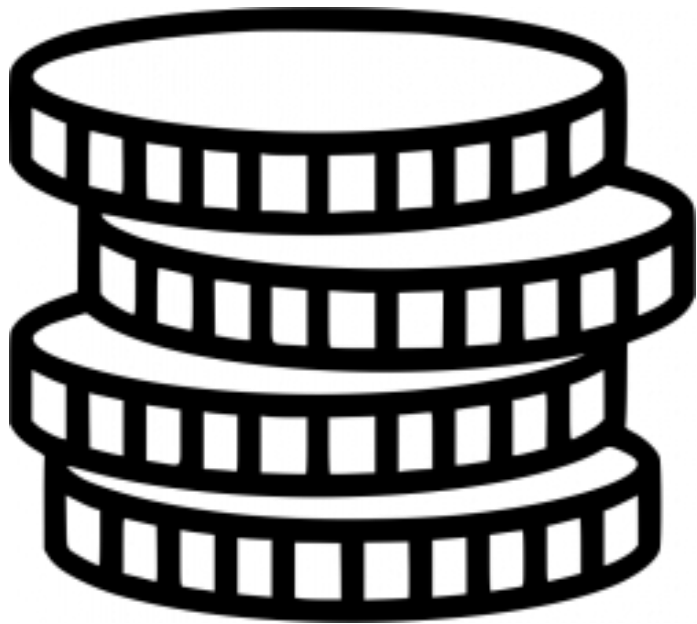
Icebreaker

Let's get to know each other...



Duration: 10 minutes

Activity 2: Icebreaker



In this activity, each of you are going to share something about yourself.

Instructions:

1. On the table, there is a bowl of South African coins.
2. Select a coin and take note of the year that the coin was produced.
3. When it is your turn, share something about your life that occurred in the year that the coin was produced.

Activity 4 AI and the Insurance Industry



Duration: 10 minutes

Activity 4 AI and the Insurance Industry

Watch this video called What happens next in insurance: AI and machine learning.



Notes: _____

Duration: 10 minutes

Activity 5
Examples of AI
Applied in the
Insurance
Industry



Duration: 20 minutes

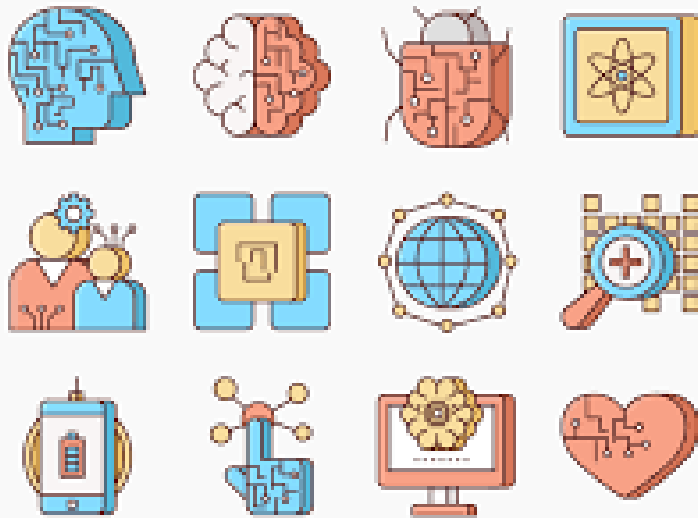
Activity 5 Examples of AI Applied in the Insurance Industry

Notes:

Duration: 20 minutes

Activity 6

Pair and Share



Duration: 30 minutes

Activity 6 Pair and Share

Now you are going to create some of your own uses for AI in any aspect of life. A special prize awaits the groups who can create a use specific to the insurance industry!

Instructions:

1. You will be split up into groups of four.
2. In your groups:
 - a) Create a use of AI in insurance.
 - b) Select a use of AI.
 - c) Select a data group.
 - d) Combine them to create a new product/use of AI.
 - e) Present your product to the group.



Duration: 30 minutes

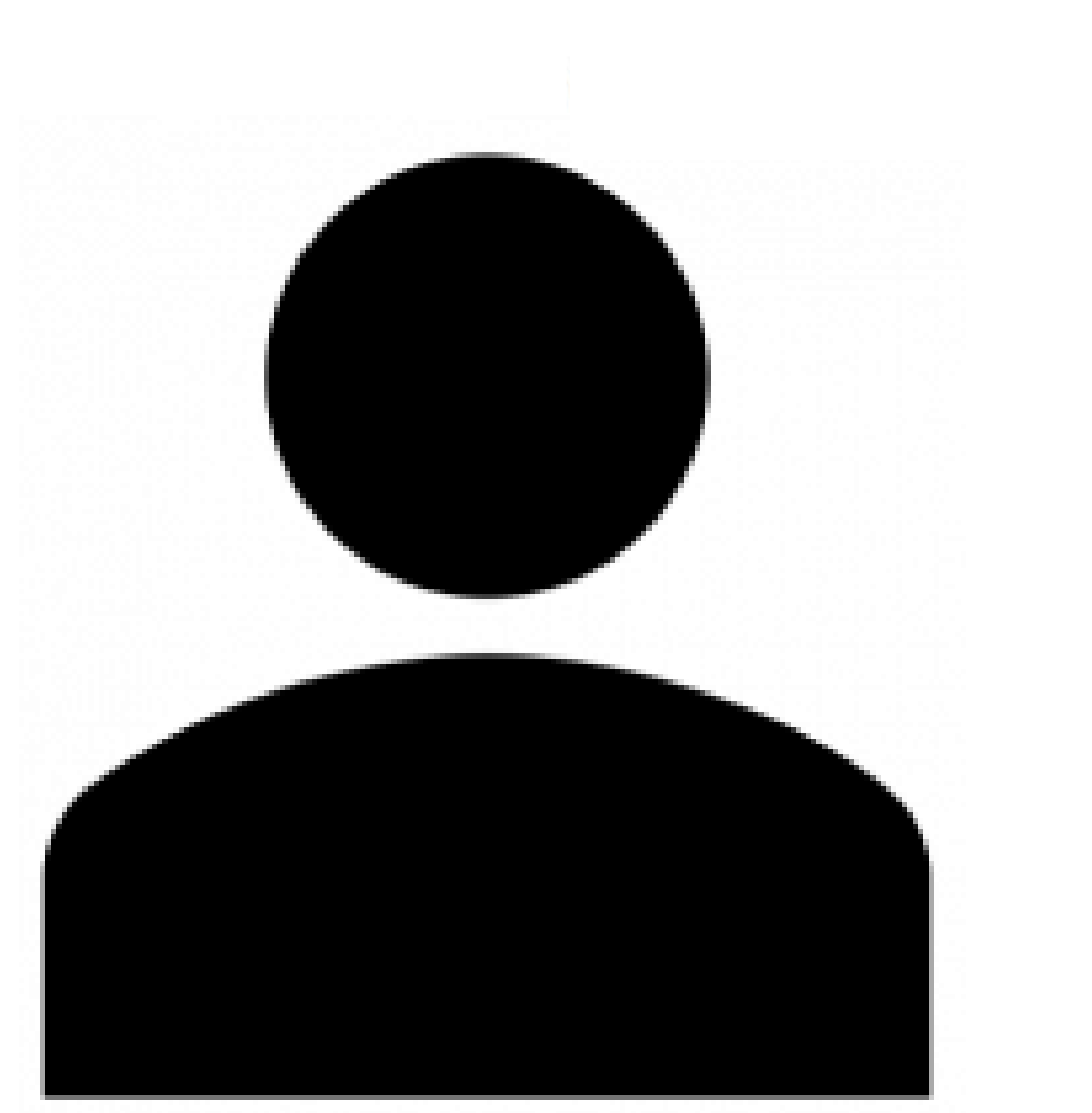
Activity 6 Pair and Share

Write down your ideas here:

Activity 7

Post-course Survey

Complete the survey on the next page to find out how much you have learned about artificial intelligence.



Duration: 10 minutes

Activity 7 Pre-course Survey

1. Do you know what AI (artificial intelligence) is?

Yes

No

2. What is your first thought when you think about AI?

3. How do you think AI can be used in the insurance industry?

4. What are some of the advantages of using AI?

5. Do you think that AI could be dangerous? If so, why?

Yes

No

Wiki

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

- **Artificial Intelligence (AI):** intelligent programs that achieve tasks usually tackled by humans. A field of research which includes Machine Learning, Deep Learning, Natural Language Processing, Visual Recognition, among others.
- **Data set:** a list of curated data gathered to train a model or to evaluate its performance. In our case, the data set is composed of images, mostly related to fashion. For further explanation, see also labelled data.
- **Machine Learning (a branch of AI):** an AI is a program that achieves tasks usually tackled by humans. One of the ways to build this AI is to use Machine Learning models. These models have the ability to learn using labelled data. For example, if you want the model to recognise dresses in pictures, you will show it a few hundreds of pictures and tell it they correspond to dresses. You will do so until it is able to recognise them in pictures it has never seen before.

Source: medium.com

Wiki

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

- **Model:** a mathematical model is a way of understanding the world through equations. But the world is actually quite restricted since it's only made of the type of data our model is able to read (be it images, sounds, texts, stock prices, ...). Given an input, a model is trained to provide a proper output. In the case below, the input is an image and the output is a localised attribute, e.g. the handbag. In machine learning, all models are trained with data to behave in a specific way.
- **Natural Language Processing (NLP):** a branch of Artificial Intelligence focus on text. The name is pretty self explanatory: the machine is processing the natural (=human) language. That's how for example spam emails end up in the spam mailbox: because your email uses an NLP system trained to recognise and filter spams.
- **Pattern:** a structure in the data* that repeats itself. The model automatically learns to extract, recognize and characterise patterns.

Source: medium.com

Wiki

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

- **Tagging:** tagging is to artificial intelligence* as hashtag is to Instagram. Each image could be associated to tags, for example, #tshirt, #red, #cropped, etc.
- **Visual recognition (also called Computer Vision):** one of Artificial Intelligence's branch focused on images, hence the name visual + recognition. A model can be trained to recognise specific items in pictures, such as a handbag or a cellphone.

Wiki

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Add more terms to your wiki:

Closing Comments

Are there any comments that you would like to share with the group?

Do you have any questions about AI that weren't answered in this session?



Duration: 5 minutes