III. Summary

The most important decisions that determine how well our society can adapt to the changes brought by Al aren't technological. They are political.

Everything that we have learned about AI suggests that the future is bright. We will get new and better services and increased productivity will lead to positive overall outcomes – but only on the condition that we carefully consider the societal implications and ensure that the power of AI is used for the common good.

What we need to do to ensure a positive outcome

Still, we have a lot of work to do.

- We need to avoid algorithmic bias to be able to reduce discrimination instead of increasing it.
 We also need to learn to be critical about what we see, as seeing is no longer the
- same as believing and develop AI methods that help us detect fraud rather than just making it easier to fabricate more real-looking falsehoods.
 We need to set up regulation to guarantee that people have the right to privacy, and
- that any violations of this right are strictly penalized.

 We also need to find new ways to share the benefits to everyone, instead of creating

an AI elite, those who can afford the latest AI technology and use it to access unprecedented economic inequality. This requires careful political judgment (note that by political judgment, we mean decisions about policy, which has little to do with who votes for whom in an election or the comings and goings of individual politicians and political parties).

NOTE

The importance of policy

The most important decisions that determine how well our society can adapt to the evolution of work and to the changes brought by Al aren't technological. They are political.

The regulation of the use of Al must follow democratic principles, and everyone must

have an equal say about what kind of a society we want to live in in the future. The

only way to make this possible is to make knowledge about technology freely available

to all. Obviously there will always be experts in any given topic, who know more about

it than the rest of us, but we should at least have the possibility to critically evaluate what they are saying.

implications.

background about AI so that we can have a rational discussion about AI and its

What you have learned with us supports this goal by providing you the basic

As you recall, we started this course by motivating the study of AI by discussing

Our role as individuals

prominent AI applications that affect all our lives. We highlighted three examples: self-driving cars, recommendation systems, and image and video processing.

During the course, we have also discussed a wide range of other applications that contribute to the current technological transition.

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Note

Hidden agenda We also had a hidden agenda. We wanted to give you an opportunity to experience

the thrill of learning, and the joy of heureka moments when something that may have been complicated and mysterious, becomes simple and if not self-evident, at least comprehensible. These are moments when our curiosity is satisfied. But such satisfaction is temporary. Soon after we have found the answer to one question, we will ask the next. What then? And then?

If we have been successful, we have whetted your appetite for learning. We hope you

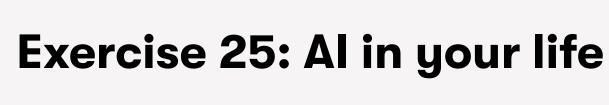
as well as other topics of your interest. To help you with your exploration, we have collected some pointers to Al material that we have found useful and interesting.

will continue your learning by finding other courses and further information about Al,

feel like there are risks we should discuss, or opportunities we should go after, don't wait that someone else reacts

Now you are in a position where you can find out about what is going on in AI, and

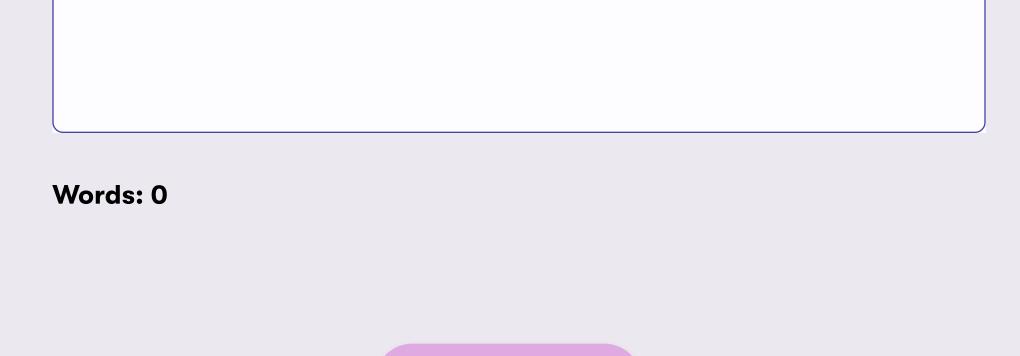
what is being done to ensure its proper use. You should do so, and whenever you



Your answer

How do you see Al affecting you in the future, both at work and in everyday life? Include both the positive and possible negative implications.

Unanswered



course, and I believe we will never be. We will keep doing our best updating and improving it, and making it the best AI MOOC in the world.

This is not the end. This is the beginning.

Like the course isn't finished, you shouldn't think that your exploration of AI is finished either. The progress is quite rapid and it may seem too much to keep track of, but the comforting news is that the basic principles have stayed more or less the same decade after decade. As long as you know the basics about problem-solving

strategies, handling uncertainty, and learning from data, you should be able to

That's it for now. We thank you for joining us. This has been a great adventure for

us, and we really hope that you enjoyed it too. We are not yet finished with the

easily put new things into perspective. This is why you had to draw diagrams with chickens crossing rivers, Towers of Hanoi, why you had to calculate the probability of rain in Helsinki, or detect happy faces by a neural network. Knowing the fundamentals, or the elements of AI, is much longer lasting knowledge than learning the technical details of a particular AI solution.

Below we give a few pointers that we have found useful. Keep learning, stay curious.

"The future has not been written. There is no fate but what we make for ourselves." (John Connor)

Our forthcoming AI programming MOOC (coming 2020)
 Check out other University of Helsinki's open online courses at https://mooc.fi/en.

- You are welcome to apply to the University of Helsinki too!
 If you want help finishing an Al project for your company, the Reaktor Al team is happy to help!
- Recommended programs for continued education: <u>'Al Diploma' by HY+/Aalto PRO/FCAI</u>, and <u>'Al:n perusteet' by Aalto Executive Education (in Finnish)</u>

• The University of Helsinki will open up all its 1st year computer science studies to all

A friendly introduction to machine learning (Luis Serrano/Udacity) (30min)
 Andrew Ng's <u>Machine Learning MOOC</u> at Coursera

• Our advisor, Risto Siilasmaa's "What is Machine Learning" video (1h 18min)

- Udacity <u>School of Al</u>
 Machine Learning <u>Learn Al with an Al (Korbit)</u>
- After completing Chapter 6 you should be able
- to:

the claims made about Al

Identify some of the major societal implications of AI including algorithmic bias,
 AI-generated content, privacy, and work

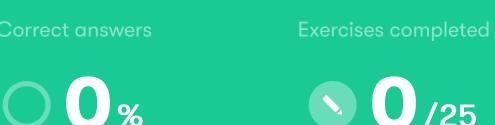
Understand the difficulty in predicting the future and be able to better evaluate

and ask questions about this chapter.

Please join the Elements of Al community at **Spectrum** to discuss

You reached the end of the course!

Correct answers



After you have completed all the exercises and peer reviews, your answers will be reviewed by our staff.

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