



ARTIN FUTURE PROJECT

Module 2

Unit 2.2: Testing out artificial intelligence applications

Developed by:  TECHNISCHE
UNIVERSITÄT
DRESDEN

Technische Universität Dresden



Module 2 | Unit 2.2



Total estimated time:	~ 140 min.
Task:	<ul style="list-style-type: none">Understanding how machine learning works via Internet applications and learning simple programming activities

Learning objectives	
Educators:	<p>Know a range of applications using AI for different didactical objectives</p> <p>Transfer their knowledge of the functioning of algorithms to the operating mode of applications using AI by testing them out</p>
Students:	<p>Know how different machine learning applications work by having the opportunity to try them out.</p> <p>Know the basic logic of algorithms within a playful programming environment</p>

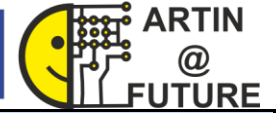


Schedule:

Unit part	Estimated Time	Target group	Approach	Content description depending on Level / Age	Materials (Links, Worksheets, etc.)
Intro	20 min	GS/ HS/ AE	HaptA/ AbstrA	Hands on Introduction via Online Application Students use the Quick! Draw! Tool to learn about a sample neural network / deep learning application.	Quick! Draw!: https://quickdraw.withgoogle.com/ Worksheet_2.2_01
Dev	90 min	GS/ HS/ AE	HaptA/ AbstrA/ LingA	Testing out further Applications The students analyse various applications that function via machine learning or are labelled as AI. Afterwards, further examples can be collected that cannot be tested in this situation (e.g. self-driving cars, ReCaptchas, face recognition) for further discussion. A) Website thispersondoesnotexist.com It generates portraits of people who do not exist. The programme also uses machine learning for this. Alternatively, the process can also be used with art, cats, horses or chemical structures. Students can refresh the page as often as they like and get a new person. They may find anomalies that indicate that these are AI-generated images. B) Translation Program (eg. DeepL, GoogleTranslator) Students translate different sample sentences into a language they are familiar with and check how the translation adapts live as they write. C) Using a Chatbot <i>Students use a chatbot and try to perform the Turing Test with it.</i>	Alternatives to A) Art: https://thisartworkdoesnotexist.com/ Cats https://thiscatdoesnotexist.com/ Horses https://thishorsesdoesnotexist.com/ Chemicals https://thischemicaldoesnotexist.com/



				D) Using a voice recognition system (e.g. Siri, Alexa, Cortana) Students use speech recognition software and test its response to sample questions.	
	90min	PS/ GS/	HaptA/ AbstrA	<p>Using a playful programming environment Students learn algorithmic thinking through playful programming activities.</p> <p>There is a wide range of online courses to learn the basics at Code.org The “Scratch” software also offers an easy introduction to programming.</p> <p>It is advised to narrow down the tasks students can do in this unit. The programme is quite versatile, also in terms of its design possibilities.</p> <p>For example:</p> <ul style="list-style-type: none"> • 1st task: Select background, select 2 figures from the library and insert them. • 2nd task: Add motion sequences, language and sounds. • 3rd task: Let the figures interact, adapt the design, change the scene, animate the figures. 	<p>Online: Courses: https://studio.code.org/courses</p> <p>Scratch: https://scratch.mit.edu/</p>
Recap	30 min	GS/ HS/ AE	AbstrA/ LingA	<p>Silent Discussion After trying out different Applications, a silent discussion could arise regarding the opportunities and risks of such applications. The theses are written on sheets of paper and distributed around the room. The students first have the task of walking around quietly and writing their opinion on the paper. (If necessary, a second round is</p>	Material_2.2_02



				possible to review the comments of the others).	
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