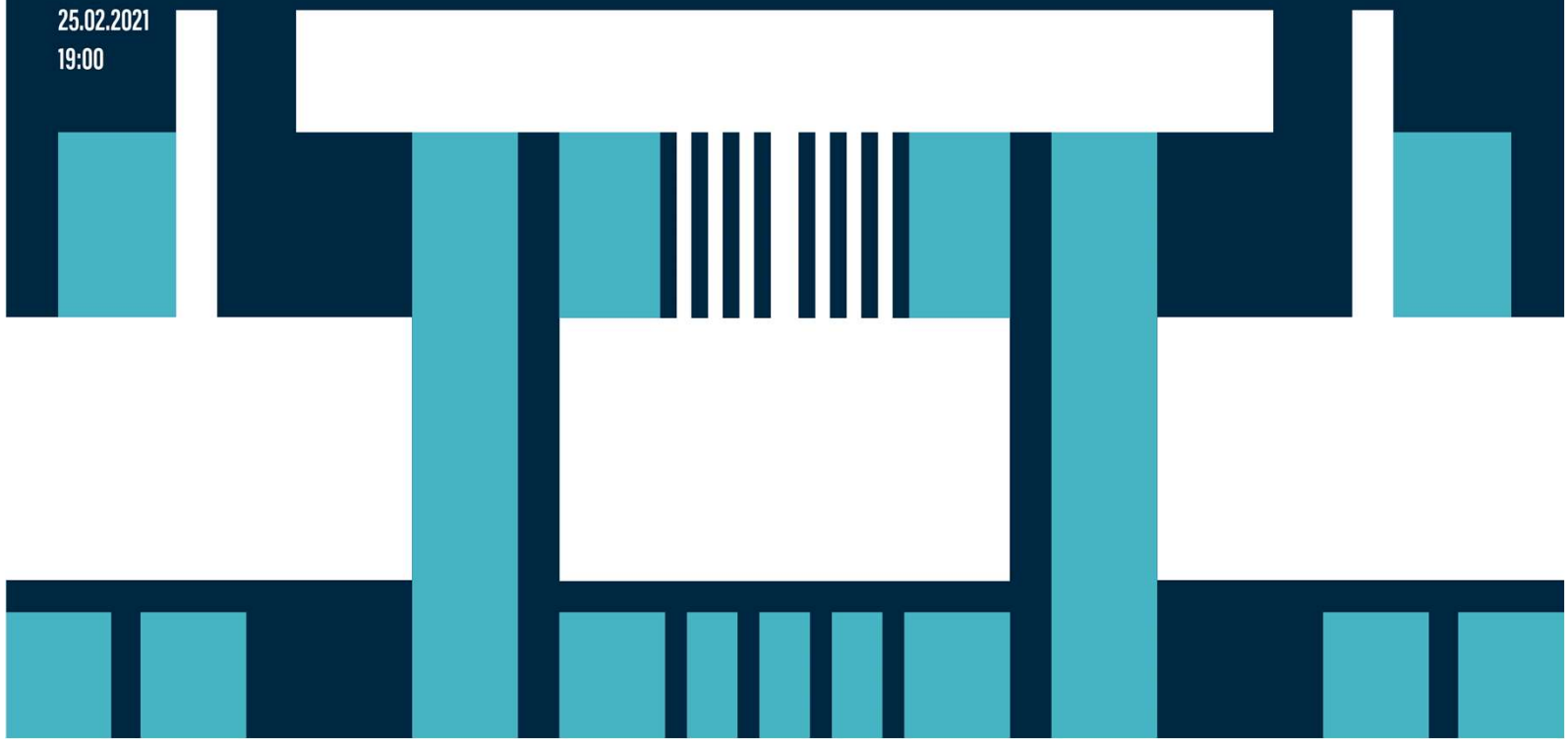
DER MENSCH UND DIE

Künstliche Intelligenz.

WO STEHEN WIR?

LES RENDEZ-VOUS DE L'UNESCO

25.02.2021
19:00



Selected Aspects of *Artificial Intelligence*

Christoph Schomer

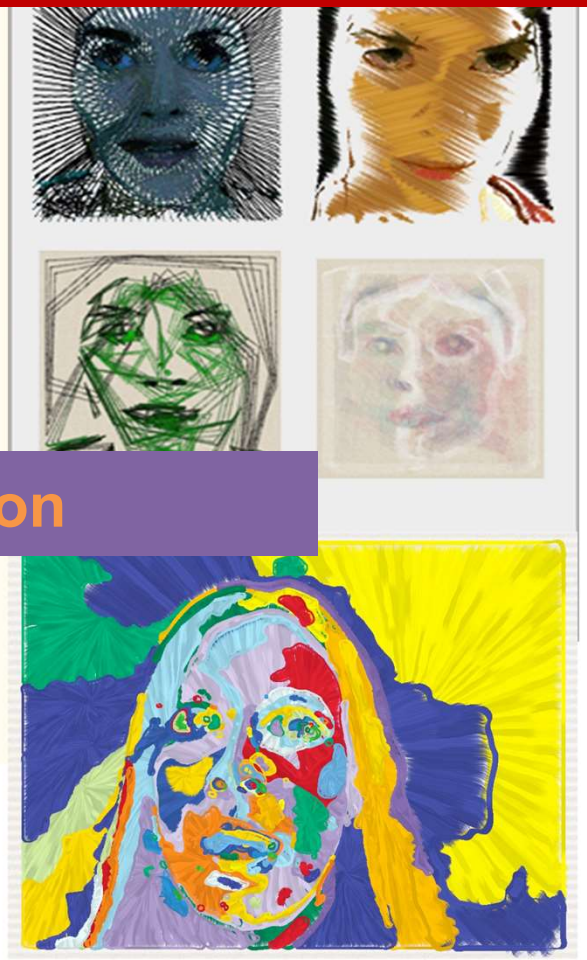
25 February 2021

Selected Aspects of *Artificial Intelligence*

Harold Cohen and AARON, the machine

https://www.nytimes.com/2016/05/07/arts/design/harold-cohen-a-pioneer-of-computer-generated-art-dies-at-87.html

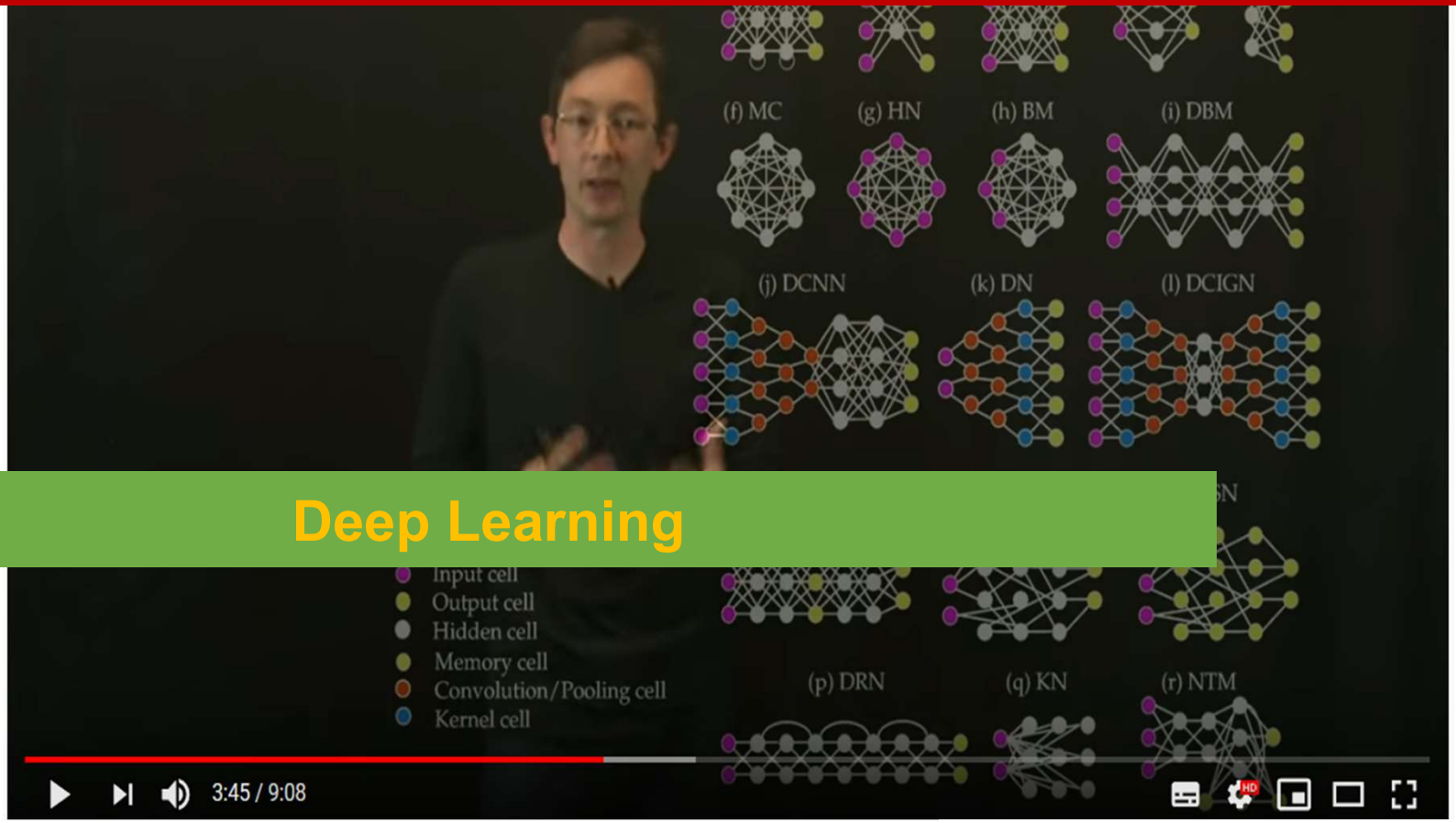
Selected Aspects of *Artificial Intelligence*



"The Painting Fool" by Simon Colton

Rather than simply being able to converse in a convincingly human manner (as Turing proposed), an "***artificially intelligent artist would have to behave in ways that were skillful, appreciative, and imaginative***".

Selected Aspects of *Artificial Intelligence*



Deep Learning

https://www.youtube.com/embed/oJNHXPs0XDk

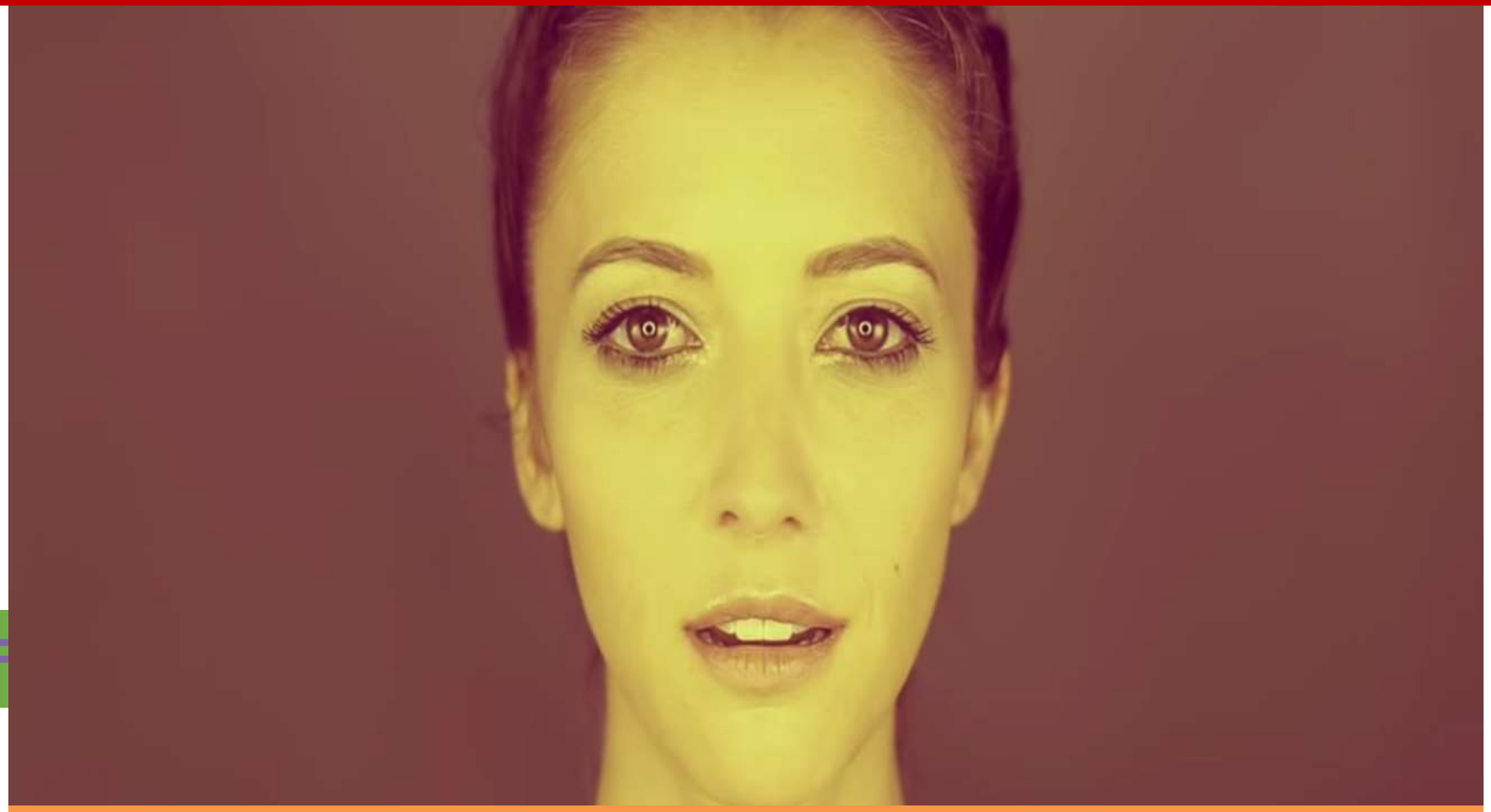
Steven Brunton, University of Washington

Selected Aspects of *Artificial Intelligence*

Have a Deep Dream!

Selected Aspects of *Artificial Intelligence*

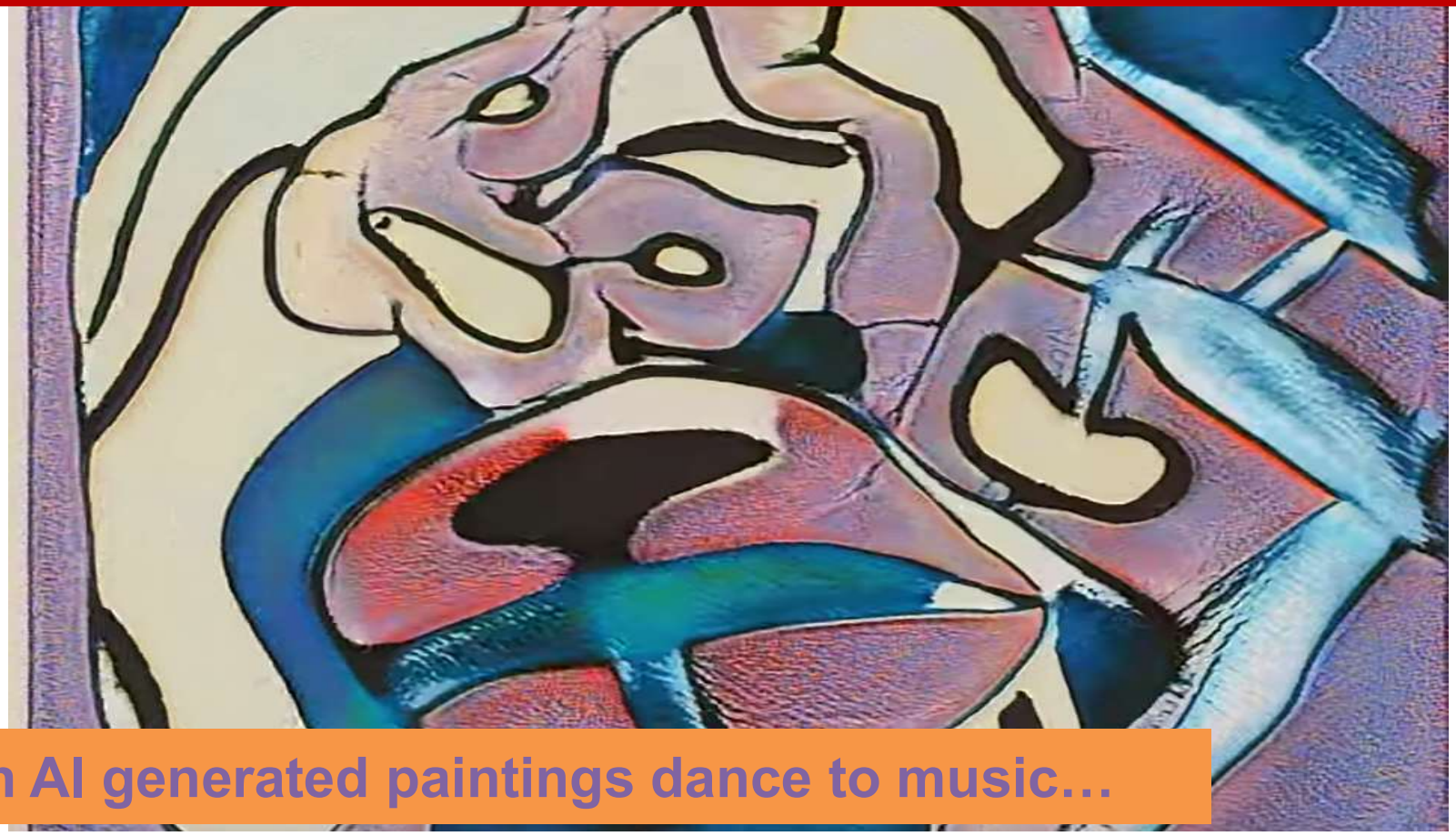
"Break F



https://www.youtube.com/embed/XUs6CznN8pw

Break Free - Song Composed with AI | Taryn Southern

Selected Aspects of *Artificial Intelligence*



When AI generated paintings dance to music…

https://www.youtube.com/embed/85l961MmY8Y (2min 24sec)

Xander Steenbrugge, Neural Synesthesia

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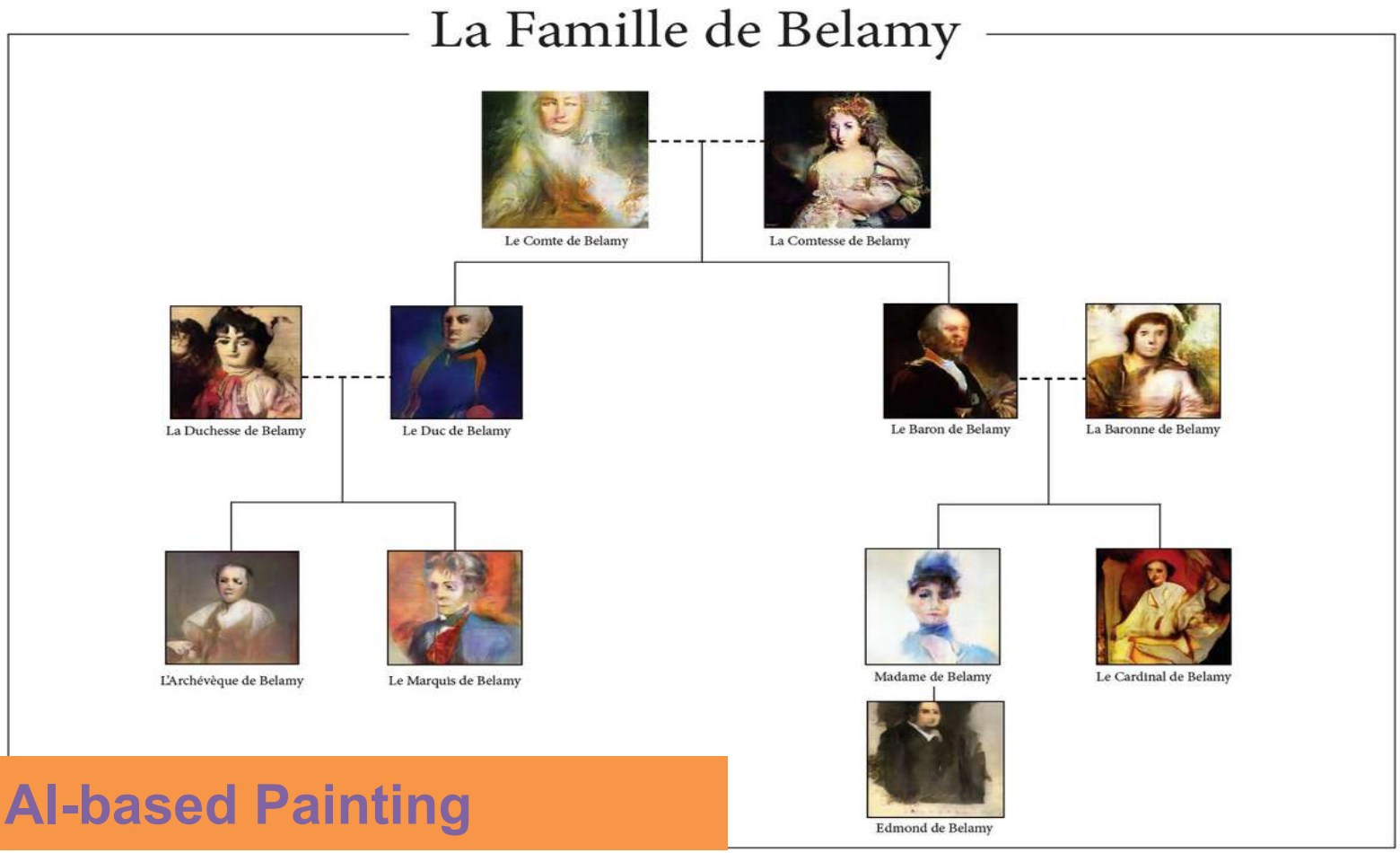

AI-based Painting

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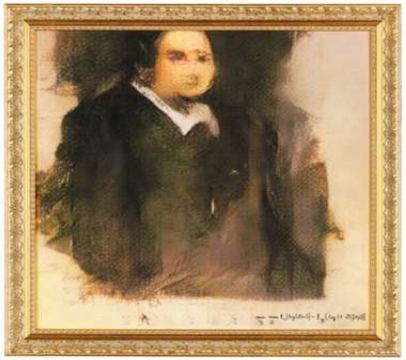
AI-based Painting



Artist: Obvious
Medium: Ink
Subject: Male portrait
Dimensions: 70cm × 70cm

LOT 363

Edmond de Belamy, from La Famille de Belamy

Price realised
USD 432,500

Estimate
USD 7,000 - USD 10,000

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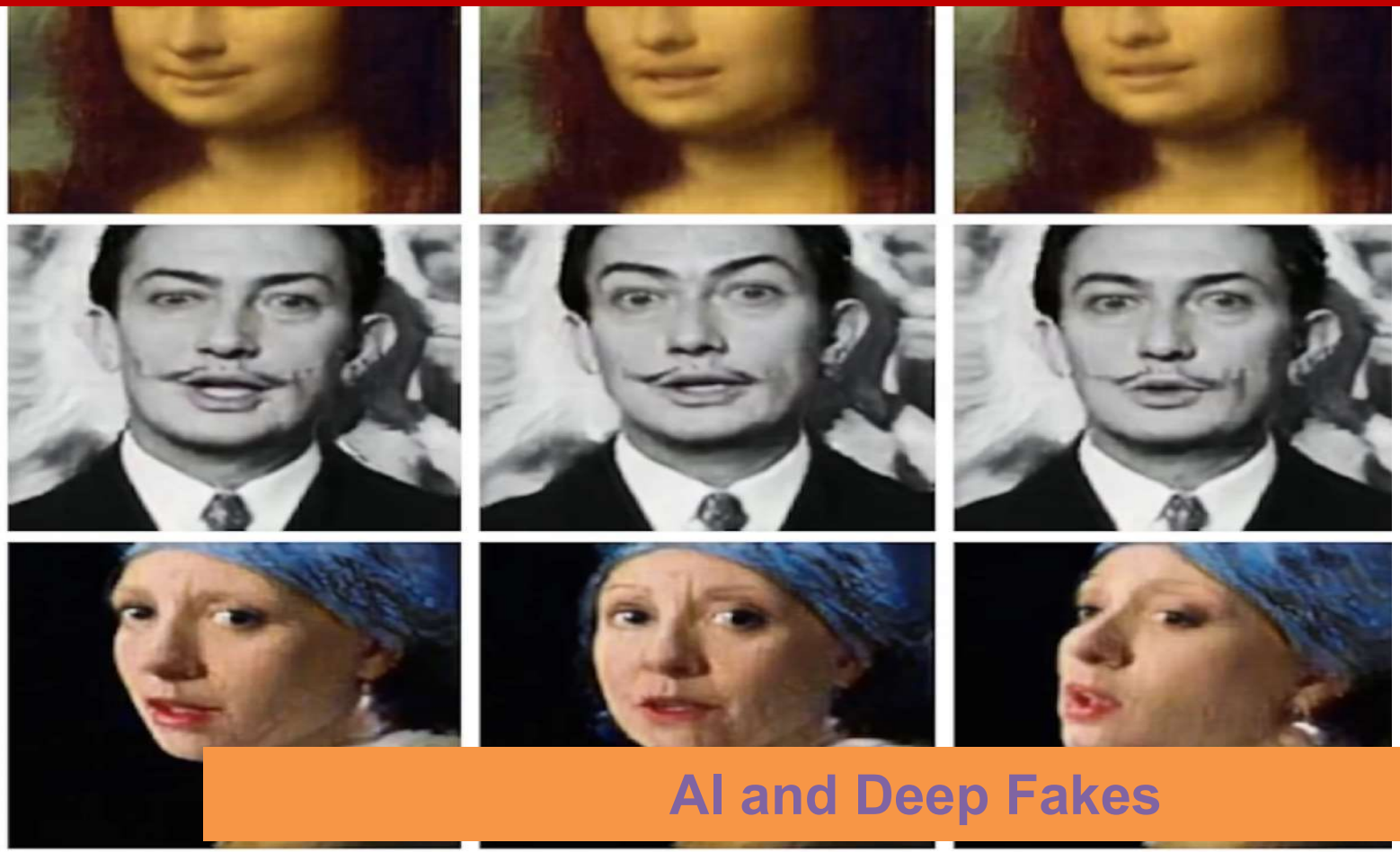
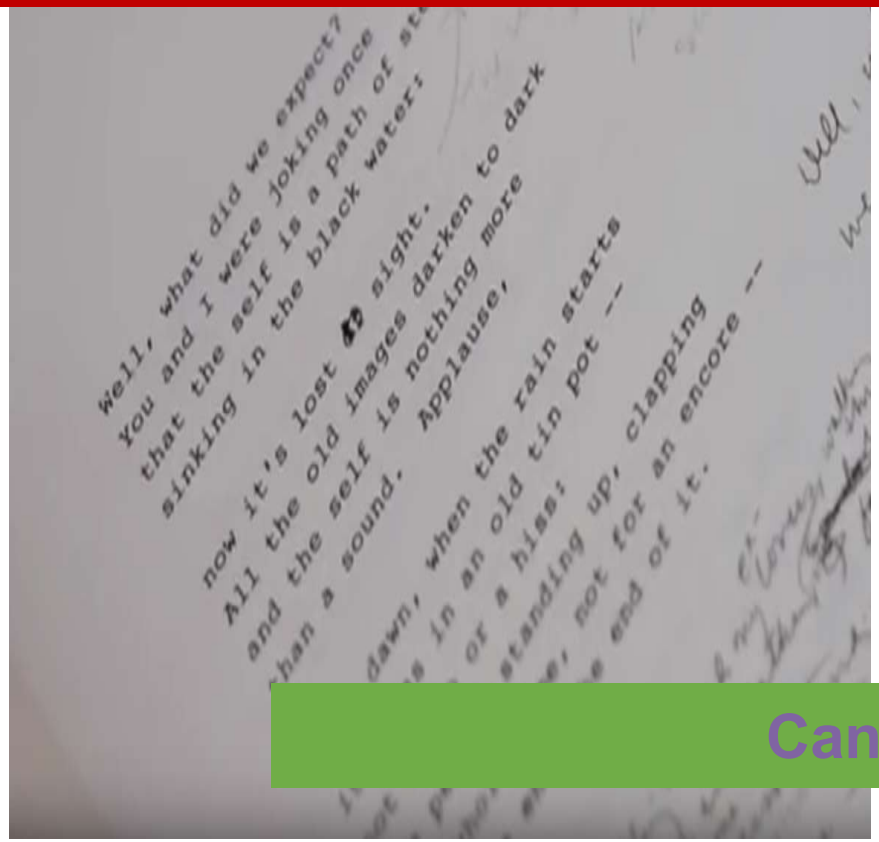


AI and Deep Fakes

Selected Aspects of *Artificial Intelligence*



I wanna be a little kid again.
I'm feeling kinda empty on the low.
You should unwind a little now and then.
Team Stacie looking like a sleepy hoe.

Back to the Sunshine State. The devil is
a lie. I hate myself a lot sometimes,
I mean, possessive, holy shit, this is
the second time. I'm always catching dimes.

I'm not the only one, I'm pinning this
again. I love a windy sunny day.
Not coming out until tonight. I miss
the happy me. I gotta find a way.

I always fall into the bullshit. Why?
Socks on in bed—the devil is a lie.

Can AI write poetry?

- https://www.youtube.com/embed/WGt8MkeGpNA 4min 55 sec
- https://www.newyorker.com/culture/annals-of-inquiry/the-mechanical-muse

Selected Aspects of *Artificial Intelligence*

Life Science + Artificial Intelligence

Data Analytics Applications

- Profiling
- Customer Retention
- Market Basket Analysis
- Trend Detection
- Fraud Detection
- Intrusion Detection
- …

Selected Aspects of *Artificial Intelligence*

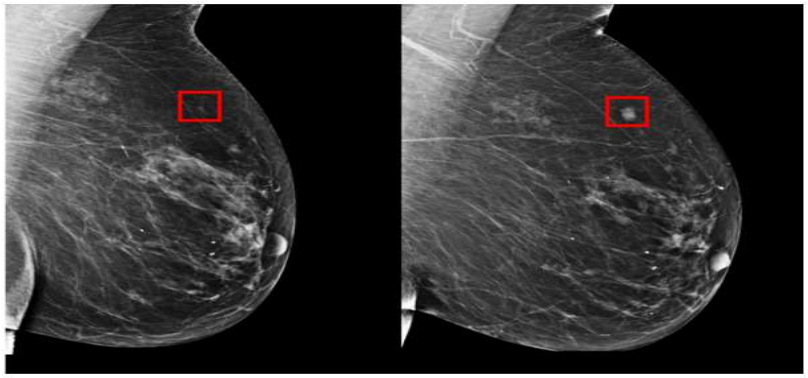
Life Science + Artificial Intelligence

TC

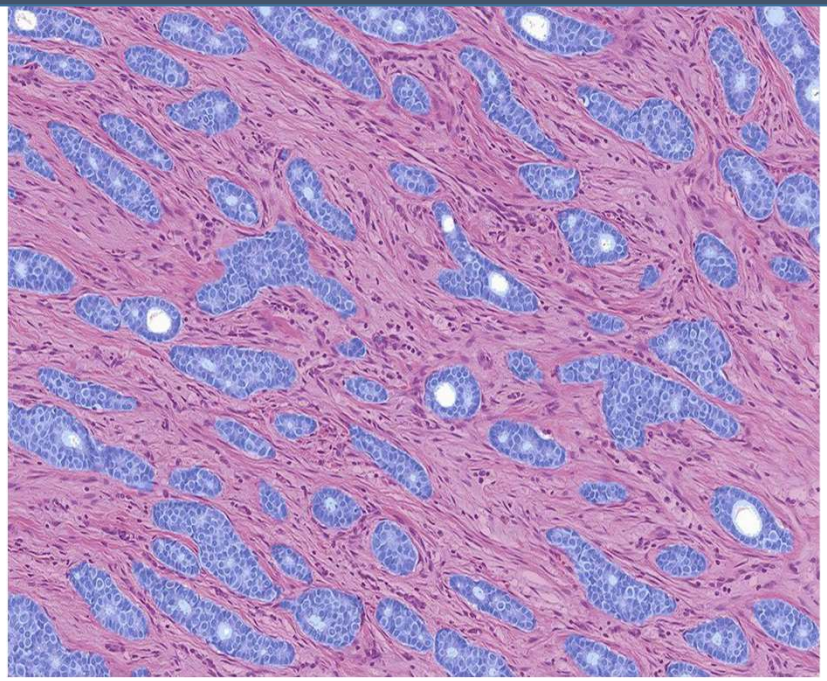
MIT AI tool can predict breast cancer up to 5 years early, works equally well for white and black patients

Darrell Etherington

@etherington / 1 month ago



MIT's Computer Science and Artificial Intelligence Lab has developed a new deep learning-based AI prediction model that can anticipate the development of breast cancer up to five years in advance. Researchers working on the product also recognized that other similar projects have often had inherent bias because they were based overwhelmingly on white patient populations, and specifically designed their own model so that it is informed by "more equitable" data that ensures it's "equally accurate for white and black women."



https://techcrunch-com.cdn.ampproject.org/c/s/techcrunch.com/2019/06/26/mit-ai-tool-can-predict-breast-cancer-up-to-5-years-early-works-equally-well-for-white-and-black-patients/amp/

Selected Aspects of *Artificial Intelligence*

Life Science + Artificial Intelligence

Bustan et al.: *Psychological, cognitive factors and conte*
influences in pain and pain-related suffering as revealed by
combined qualitative and quantitative assessment approac
ONE (2018).

UNIVERSITÉ DU LUXEMBOURG

Psychological, cognitive factors and contextual influences in pain and pain-related suffering as revealed by a combined qualitative and quantitative assessment approach

Smadar Bustan[1,2,3]*, Ana Maria Gonzalez-Roldan[3,4], Christoph Schommer[5], Sandra Kamping[2], Martin Löffler[2], Michael Brunner[2], Herta Flor[2], Fernand Anton[3]

1 INSERM U-987, CHU « Pathophysiology and Clinical Pharmacology of Pain » Hospital Ambroise Paré, Boulogne-Billancourt, France, 2 Department of Cognitive and Clinical Neuroscience, Central Institute of Mental Health, Medical Faculty Mannheim, University of Heidelberg, Mannheim, Germany, 3 Institute for Health and Behavior, FLSHASE/INSIDE, University of Luxembourg, Esch-sur-Alzette, Luxembourg, 4 Research Institute on Health Sciences (IUNICS), University of Balearic Islands, Palma de Mallorca, Spain, 5 ILIAS Laboratory, Dept. of Computer Science and Communication, FSTC, University of Luxembourg, Esch sur-Alzette, Luxembourg

* smadyil@gmail.com

Abstract

Previous psychophysiological research suggests that pain measurement needs to go beyond the assessment of Pain Intensity and Unpleasantness by adding the evaluation o Pain-Related Suffering. Based on this three-dimensional approach, we attempted to elucidate who is more likely to suffer by identifying reasons that may lead individuals to repor Pain and Pain-Related Suffering more than others. A sample of 24 healthy participants (age range 18–33) underwent four different sessions involving the evaluation of experimentally induced phasic and tonic pain. We applied two decision tree models to identify variables (selected from psychological questionnaires regarding pain and descriptors from post-session interviews) that provided a qualitative characterization of the degrees of Pain Intensity, Unpleasantness and Suffering and assessed the respective impact of contextual influences. The overall classification accuracy of the decision trees was 75% for Intensity, 77% for Unpleasantness and 78% for Pain-Related Suffering. The reporting of suffering was predominantly associated with fear of pain and active cognitive coping strategies, pain intensity with bodily competence conveying strength and resistance and unpleasantness with the degree of fear of pain and catastrophizing. These results indicate that the appraisal of the three pain dimensions was largely determined by stable psychological constructs. They also suggest that individuals manifesting higher active coping strategies may suffer less despite enhanced pain and those who fear pain may suffer even under low pain. The second decision tree model revealed that suffering did not depend on pain alone, but that the complex rating-related decision making can be shifted by situational factors (context, emotional and cognitive). The impact of coping and fear of

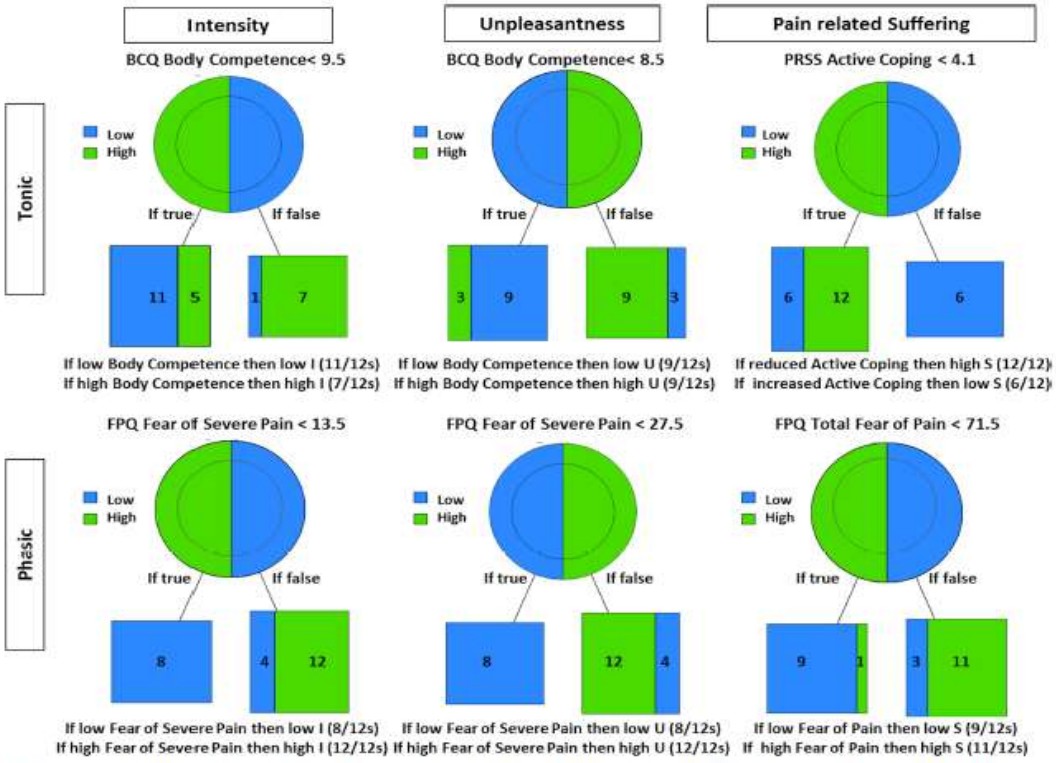


Fig 1. Pruned decision trees for intensity, unpleasantness and pain-related suffering for the tonic (upper trees) and phasic (bottom trees) conditions. Each tree presents the decision rule (superior line) that predicts the ratings of the subjects as well as the number of subjects predicted under each group (bottom boxes). The right leaf of the tree represents the amount of subjects who followed the IF-THEN rule [59–64] in confirming the inference stated (yes), and the left represents the subjects who did not (no).

Selected Aspects of *Artificial Intelligence*

Life Science + Artificial Intelligence

Source: https://medicalfuturist.com/robotics-healthcare

Artificial Prostheses

Selected Aspects of *Artificial Intelligence*

Life Science + Artificial Intelligence

Computer-based Surgery

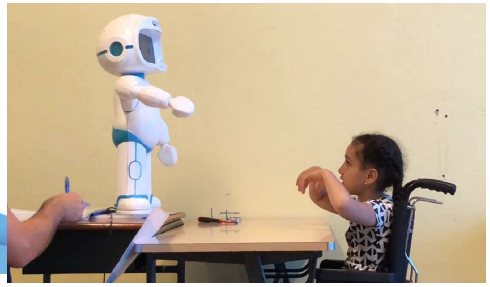
Source: https://medicalfuturist.com/robotics-healthcare

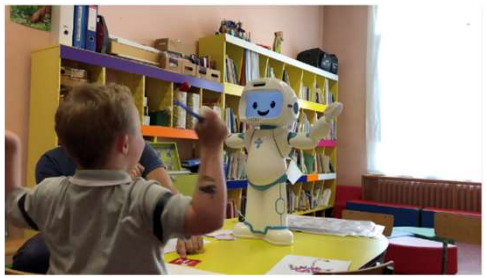
Selected Aspects of *Artificial Intelligence*

Life Science + Artificial Intelligence

Autism - a huge Challenge in Public Health

LuxAI





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https://www.youtube.com/embed/jZg5QhL3Ckc

- **Use Artificial Intelligence for Doctor's Clinical paperwork**
- **Use Machines to Reduce Errors**
- **Harvesting data to improve outcomes**
- **Treat Patients are home, not in the hospital**

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Life Science + Artificial Intelligence

https://www.youtube.com/embed/4cRyaQ3g_fs (3.32)

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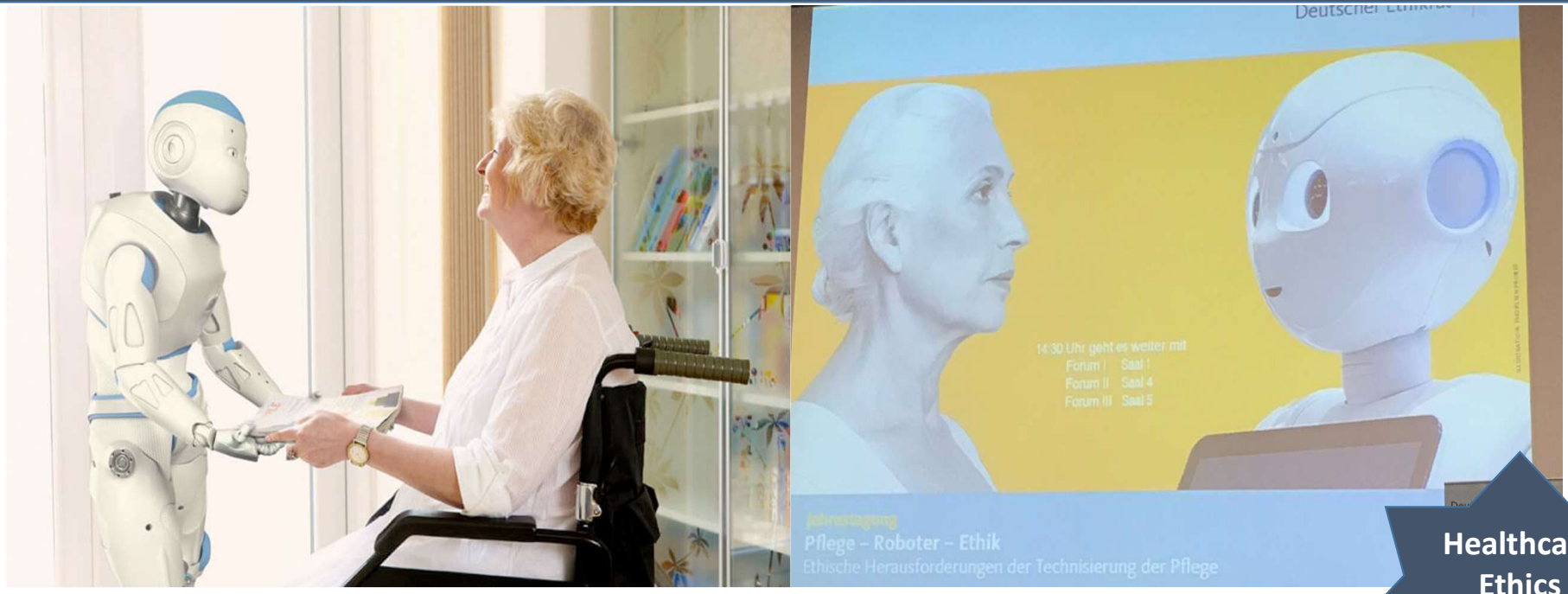
Life Science + Artificial Intelligence



Healthcare
Ethics
Robots

Participating the German Ethics Council. Berlin, 2019

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