

Robots vs Humans Dilemma

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Session Synopsis

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In recent years, there has been a huge concern that robots will take over our jobs and, as a result, many people will be redundant and unemployed. In this session, participants will have an overview of selected careers that will be endangered and their alternatives in the post-digital era. Furthermore, recommendations for future readiness will be presented.

Learning Outcomes

Learning Outcomes

- ▶ Explore selected jobs that are expected to disappear in future
- ▶ Explore alternative future careers of selected endangered jobs
- ▶ Identify recommendations and suggested solutions for future readiness

About ADVETI

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Learning Outcomes

The vocational education is essential in order to achieve a sustainable economy which supports the Economic Vision of Abu Dhabi 2030. Technical and Vocational Education and Training (TVET) system focuses on building a vocational system to graduate UAE nationals with high quality in technical and vocational skills who are ready to enter the work force, which will enhance productivity.

- ▶ Est. in 2007
- ▶ Initiated by Abu Dhabi Government
- ▶ 5 Institutions
- ▶ Umbrella of ACTVET
- ▶ Technical & Vocational
- ▶ Accredited - CAA & NQA
- ▶ Majority of Graduates are UAE Nationals



AI Effect on Careers

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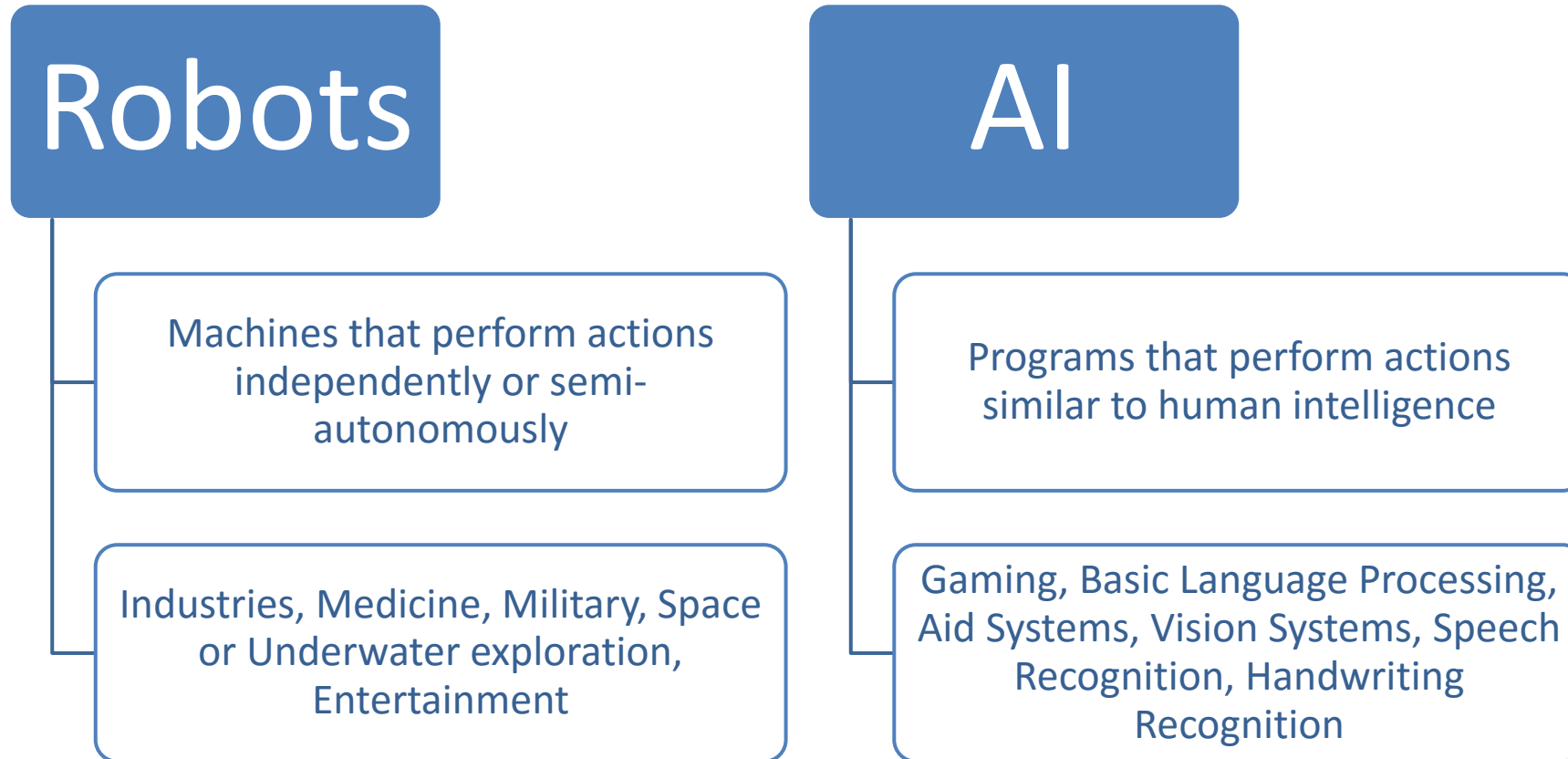
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AI Effect on Careers



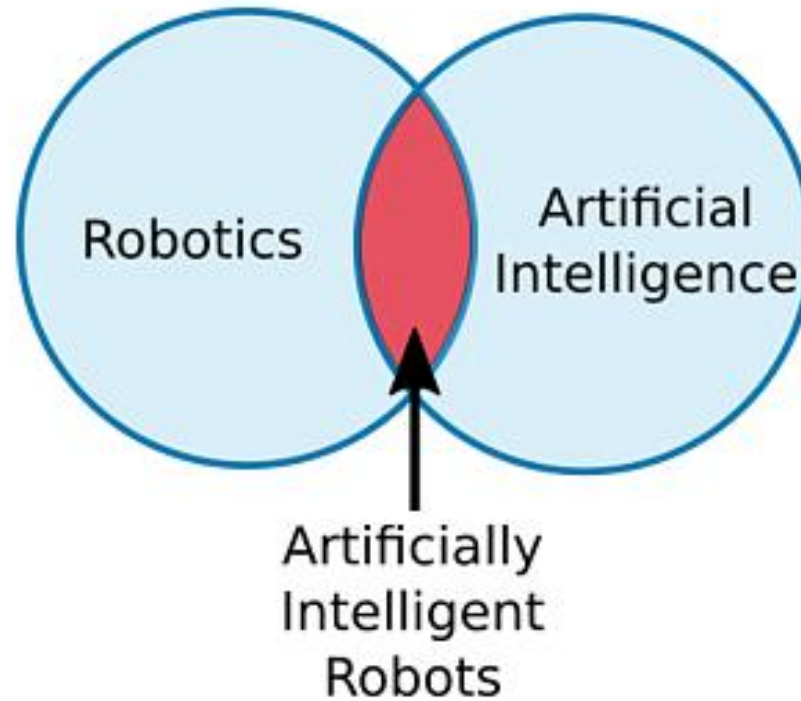
Source: "Thinking Beyond Digital Transformation - The Post-digital Era", Preludesys, 2019

AI Effect on Careers



Source: “Difference between robotics and artificial intelligence”, Esha Oberoi, Sky Fi Labs, 2018

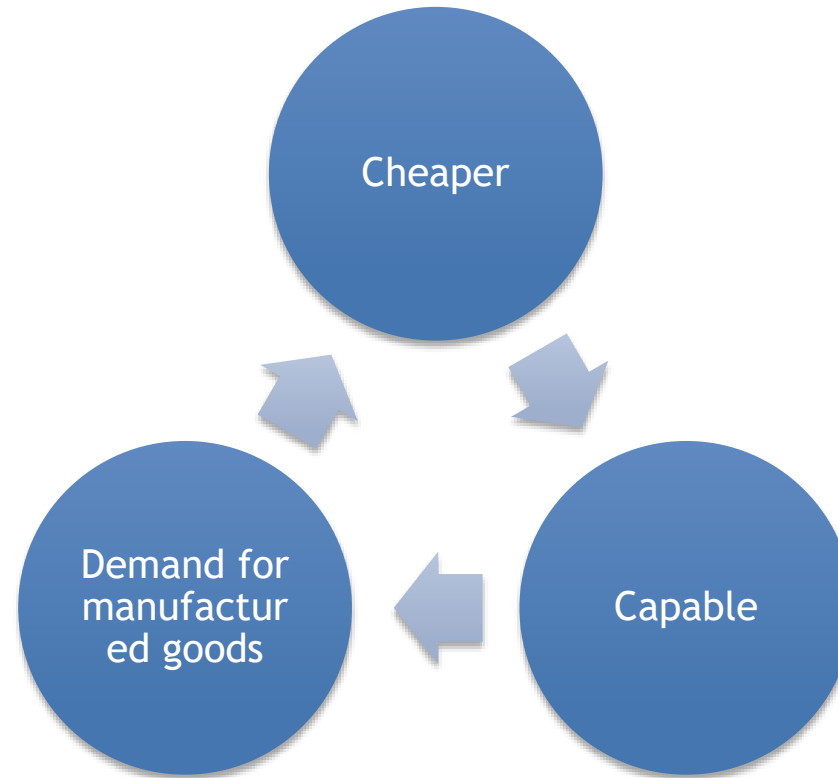
AI Effect on Careers



Source: "What's the Difference Between Robotics and Artificial Intelligence?", Alex Owen-Hill , ROBOTIQ, 2017

AI Effect on Careers

Reasons for Robot Surge



Source: “How Robots Change the World What Automation Really Means For Jobs and Productivity”, Oxford Economics, 2019

AI Effect on Careers

“Automation threatening 25% of jobs in the US, especially the 'boring and repetitive' ones”

Brookings study

“Up to 20 million manufacturing jobs around the world could be replaced by robots by 2030”

Oxford Economics

Source: “How Robots Change the World What Automation Really Means For Jobs and Productivity”, Oxford Economics, 2019

AI Effect on Careers

SWITCHING OCCUPATIONS...

75M–375M

Number of people who may need to switch occupational categories by 2030, under our midpoint to rapid automation adoption scenarios



Source: “Jobs Lost, Jobs Gained: Workforce Transitions in a Time of Automation”, McKinsey & Company, 2017

AI Effect on Careers



Robotic Receptionist at Henn na Hotel, Tokyo, 2018

AI Effect on Careers



A delivery robot being trialled by Starship Technologies in London, 2017

AI Effect on Careers



Humanoid robots work side by side with employees in the assembly line at a factory in Kazo, Japan, 2015

AI Effect on Careers



World's first operational robot policeman, Dubai, 2017

Endangered Jobs

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Endangered Jobs

Tom was the first guy losing his job because of Artificial intelligence



Endangered Jobs

- Business Administrative Jobs
- Drivers, Pilots, Traffic Controller, Traffic cops
- Rental car personnel
- Mechanics
- Surgeons in some specialties
- Teachers
- Farmers, Ranchers, Fishermen
- Construction workers
- Factory Workers
- Warehouse and Manufacturing Jobs
- Banking Services and Retail
- Delivery Services

**Any Tasks That Can
Be Learned**

Future Careers in 2040

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Future Careers in 2040

85% of Jobs That Will Exist In 2030 Haven't Been Invented Yet: Dell



Future Careers in 2040

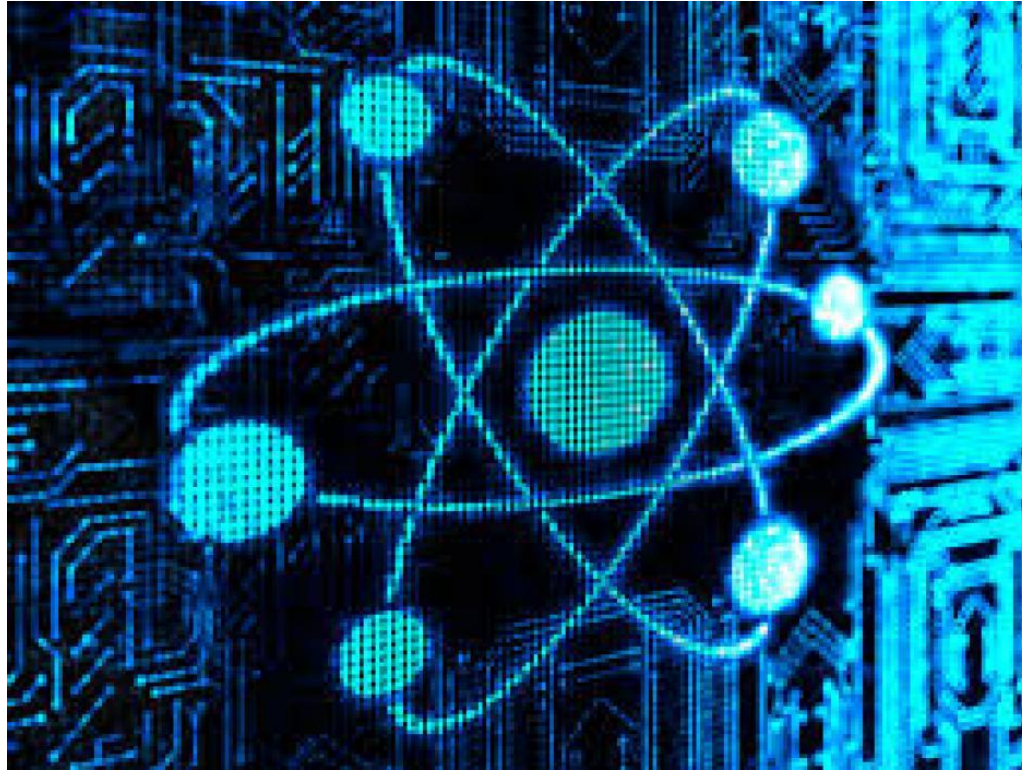
Auto-Advisor



Source: “Top jobs in 2040 will involve virtual reality, artificial intelligence & robotics”, Jonny Williamson, 2019

Future Careers in 2040

Quantum Tech Gurus



Source: “20 common jobs in 2040”, Thomas Frey, 2018

Future Careers in 2040

Human e-Sources Manager



Source: “Top jobs in 2040 will involve virtual reality, artificial intelligence & robotics”, Jonny Williamson, 2019

Future Careers in 2040

Mixed Reality Builders



Source: “20 common jobs in 2040”, Thomas Frey, 2018

Future Careers in 2040

AI Translator



Source: “Top jobs in 2040 will involve virtual reality, artificial intelligence & robotics”, Jonny Williamson, 2019

Future Careers in 2040

Asteroid Miners



Source: “20 common jobs in 2040”, Thomas Frey, 2018

Future Careers in 2040

Driverless Ground Crews



Source: “20 common jobs in 2040”, Thomas Frey, 2018

Future Careers in 2040

Drone Command Crews



Source: “20 common jobs in 2040”, Thomas Frey, 2018

Future Careers in 2040

Cultured Meat Producers



Source: “20 common jobs in 2040”, Thomas Frey, 2018

Recommendations

Recommendations

It will be difficult for machines to replace humans in service sector occupations that demand compassion, creativity, and social intelligence.



Source: “How Robots Change the World What Automation Really Means For Jobs and Productivity”, Oxford Economics, 2019

Recommendations

- ▶ We should become more familiar with emerging technologies, such as AI, big data and robotics.
- ▶ These skills are important for future: sense making, cross-culture competency, computational thinking, New media literacy, Design mindset, virtual collaboration and complex problem solving
- ▶ We should be open-minded for career change and have a novel and adaptive thinking in addition to emotional and social intelligence.

Summary

Summary

We invented AI technology to help us to do our jobs in a more effective and efficient way

so we don't have to be afraid of the change.

We should embrace it and think of the next step!

References

References

- ▶ “Thinking Beyond Digital Transformation – The Post-digital Era”, Preludesys, 2019
- ▶ “Difference between robotics and artificial intelligence”, Esha Oberoi, Sky Fi Labs, 2018
- ▶ “What's the Difference Between Robotics and Artificial Intelligence?”, Alex Owen-Hill , ROBOTIQ, 2017
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- ▶ Emerging Technologies’ Impact On Society & Work In 2030 Report, Institute for the Future (IFTF) & Dell, 2017
- ▶ Future in 2040, Future Foresight Foundation - Abu Dhabi, 2018
- ▶ “Top jobs in 2040 will involve virtual reality, artificial intelligence & robotics”, Jonny Williamson, 2019
- ▶ “20 common jobs in 2040”, Thomas Frey, 2018

Q & A

Shukran!

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