In the Whirlwind of Digitalization

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What is digitalization?

• Computerization

• Use of ICT

• Informatization

• Artificial intelligence

• "Elephant story"
SLOVENIJA
NA POTI
DIGITALNE
PREOBRAZBE

CENE BAVEC
ANDREJ KOVAČIČ
MARIJAN KRISPER
VLADISLAV RAJKOVIČ
MIRKO VINTAR
Enablers of digitalization

• Advancement of technology
  – Computing power and connectivity
  – Machine learning algorithms
  – Big data availability

• Wide accessibility of technology
DATA ANALYTICS
KNOWLEDGE DISCOVERY FROM DATA

DETECTION SUPPORT SYSTEMS

DATA

STATISTICS

MACHINE LEARNING

VIZUALIZATION

...?
Neural Network classification

• Perceptron - one layer NN
  https://www.youtube.com/watch?v=GMDDMm-Y65oA

• Deep NN - multi-layer
  http://playground.tensorflow.org

• Orange
  https://www.youtube.com/watch?v=lvgx62a8XQk
Fascinating results - What is missing

- Game playing
- Big data and data analytics
- Computer vision
- Robotics
- Cognitive computing
- ...

...
Social engineering
Social engineering

Social scoring system in China

Deep fake news

End of democracy?

... Ethical questions
Digital competences

• Information & computer science
  – Data sciences
  – Artificial Intelligence
  – Quantum computing

• Organizational sciences
  – Human use of human beings
  – System sciences
  – Information & computer sciences
  – Social sciences

– Expect unexpected
THINK

What is the added value of digitalization

- for ME and the OTHERS in the ecosystem