

- 1. Artificial intelligence
- 2. Digitalization and data analytics
- 3. Opportunities
- 4. Conflicts

Artificial intelligence



- Al: automated, independent decision making by computers
- weak AI: focused on solving particular problems, "only" supporting humans in their work
- strong AI: the same (or greater) intellectual abilities as humans
- goal: support decision-making and help to process large quantities of data
- rule based systems: reaction to (every possible) input was implemented by developer
- ML systems: self learning, based on statistical (approximate) methods, developers of algorithm do not program a result based on specific input, instead algorithm learns which result is best from relationships in data RLIT⁻ application of single, trained model creates deterministic outcome



- concerning the community as a whole (healthcare, commerce, administration, ...)
- goal: automation of working pipelines (decision making is integral step)
- coherent representation of
 - knowledge (trustworthy and labeled data sets, deep understanding of patterns, ...)
 - processing steps
 - regulations, laws (hard constraints)

view of the whole present processing pipeline (maybe stress testing it) sets

Opportunities



- scalability, speed-up, free-up resources
- harmonizing processes, share knowledge
- complete automation leads to guaranteed service level agreement of workflow
- analysts profit from knowledge of whole community (e.g. in multilingual document sets) and from statistical relationships in large data sets
- results are less influenced by personal abilities and biases of analysts

Conflicts

- technical possibilities
 general data protection regulation (GDPR)
- AI ethic guidelines
 GDPR: purpose limitation of data vs. AI ethic guidelines / technical possibilities: robustness and precision need training with realistic data (LEAs mostly collect data in individual criminal investigations)
- GDPR: minimizing data vs. AI ethic guidelines: fairness and non-discrimination need large and also redundant data sets
- GDPR: privacy of data and storage limitations vs. AI ethic guidelines: transparency needs retention, availability and auditability of training sets (key ingredients in ML model creation)
- Al ethic guidelines: explainable vs. technical possibility: some uncertainty of