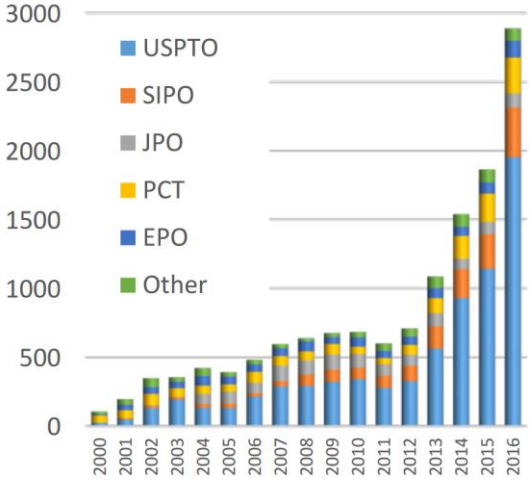
IPrime
Patents . Trademarks . Law

AI and Patenting in Europe

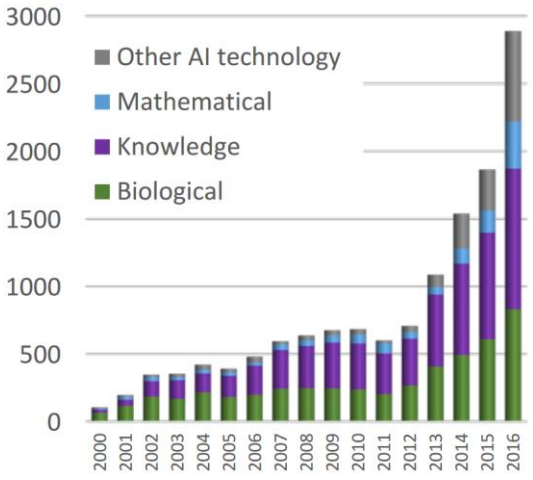
Torino, 28.3.2019

Thomas Kretschmer

Trends in AI Patenting



Number of AI patents granted 2000 – 2016

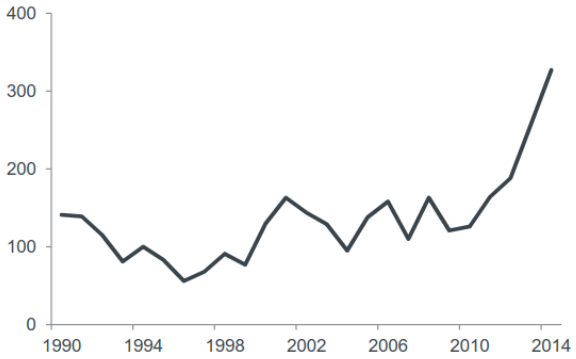


Number of AI patents granted by technology

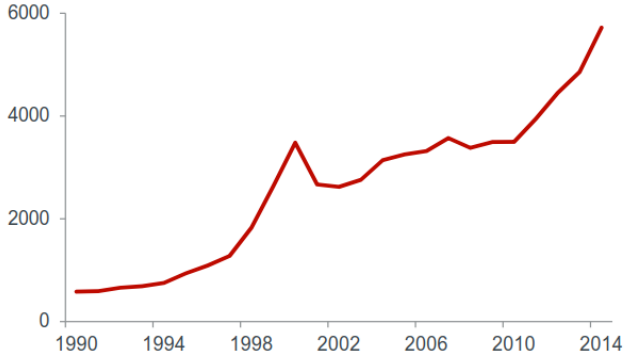
Source: Hidemichi Fujii and Shunsuke Managi, "Trends and Priority Shifts in Artificial Intelligence Technology Invention: A global patent analysis", Research Institute of Economy, Trade and Industry, Discussion Paper No. 17-E-066 (2017)

AI in European patent application:

EP applications in core AI



EP applications related to AI



Source: EPO

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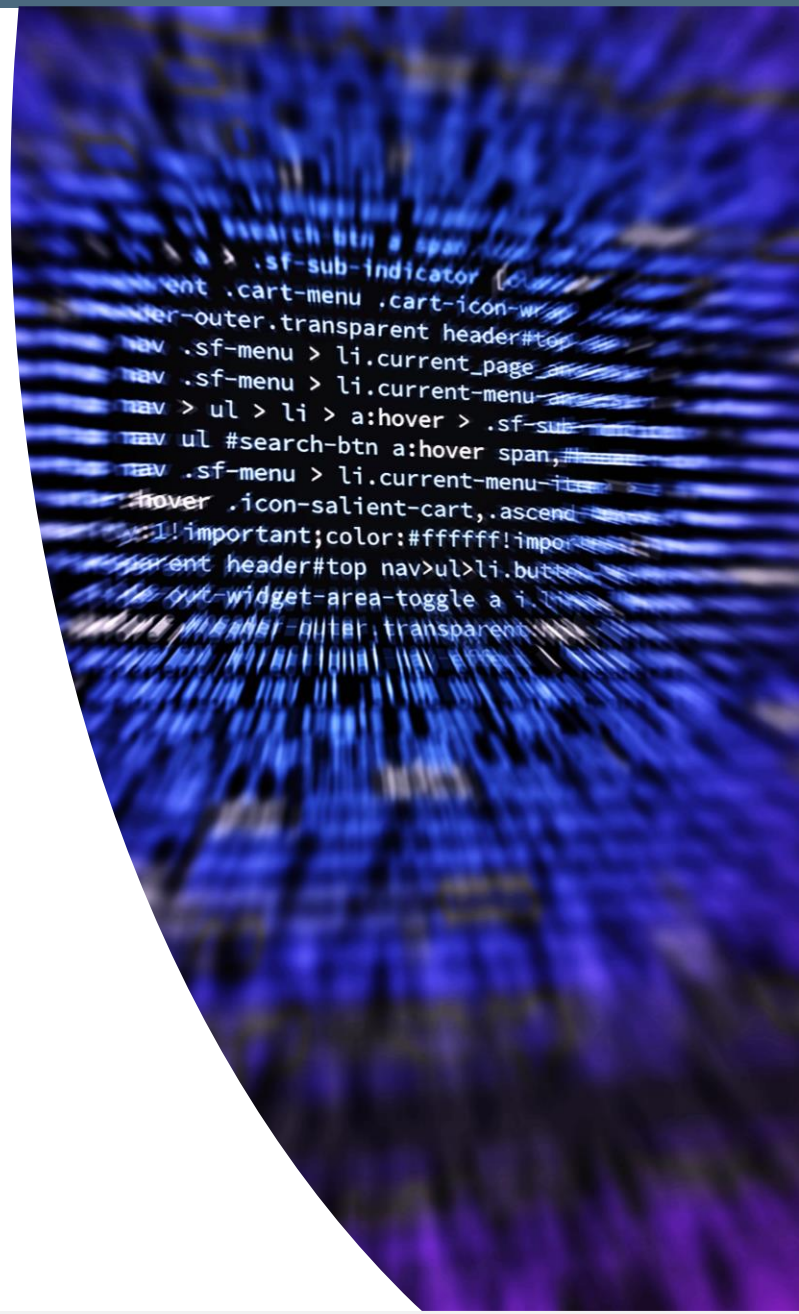
The Approach to AI in Europe

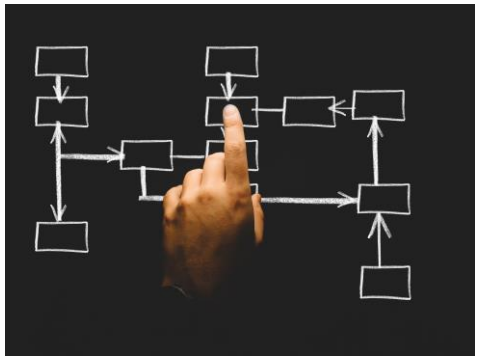
- Artificial intelligence (AI) and Machine learning (ML) are based on computational models and algorithms
- Considered to be of “abstract mathematical nature”
- Examined as “Mathematical methods”

The Approach to AI in Europe



Mathematical methods

- purely abstract ➡ excluded
- technical means required



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The Approach to AI in Europe

Question: Has claimed subject-matter a technical character as a whole?

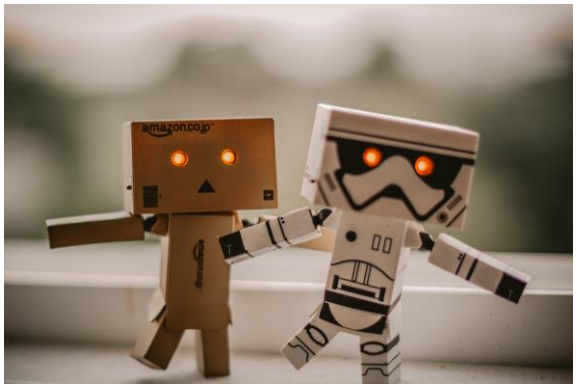
- **Application or Implementation is key**

The Approach to AI in Europe

Technical Applications serving a "technical purpose":

- controlling a specific system or process
- digital audio, image or video processing
- speech processing
- encoding data for reliable/efficient transmission
- encrypting/decrypting electronic communications
- optimizing load distribution in a computer network
- self-diving vehicles
- …

The Inventor



Is a human inventor required?

Art. 81 EPC "The inventor" shall be designated

R 19(1) EPC The designation shall state the family name, given names and full address of the inventor

R 19(2) EPC The accuracy of the designation of the inventor is not verified by the EPO

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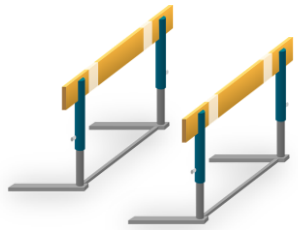
Two hurdles to overcome for patentability of AI & ML



1st hurdle Art. 52(2),(3) EPC:

Does the claimed subject-matter show a “technical character”?

- Claims may contain mix of technical and non-technical features

2nd hurdle Art. 54, 56 EPC:

Is the claimed subject-matter as a whole novel and involves an inventive step with technical effects?

- Features contributing to technical character are taken into account
- Mathematical method steps should contribute to the technical character
- Application of Problem and Solution Approach

Thank you!

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