European IP Helpdesk

Stay ahead of the innovation game.

European IP Helpdesk

IP and AI

09.04.2025

European IP Helpdesk

- Service initiative of the European Commission
- Addressing **current and potential beneficiaries of EU-funded projects, researchers and EU SMEs**
- Free-of-charge first-line support on intellectual property (IP)
- Hands-on IP and innovation management support
- International pool of IP experts from various thematic fields
- Unique cooperation scheme with the Enterprise Europe Network: 43 ambassadors from 26 EU countries

Training
free online and on-site sessions

Website
frequent updates from the world of IP and innovation

Helpline
confidential treatment of individual IP questions

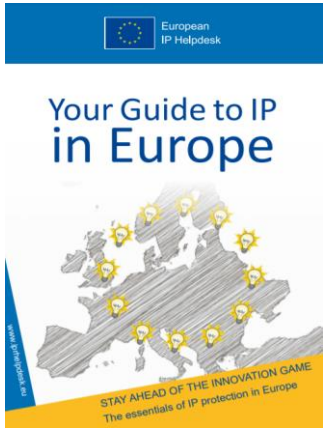
Publications
practical IP knowledge through high-level publications

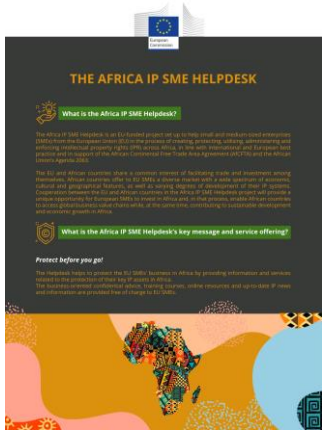
Ambassadors
local IP support throughout Europe

Events
info point at key networking events and conferences

The EC IP Helpdesks

EC IP (SME) Helpdesk Hub – Gateway to Information





- E-learning modules & more
- Guides / Topic, country, sector-specific factsheets / Infographics
- Case studies

Upcoming events

Europa - Upcoming events

09 APR 2025
Training and workshops
EU - Webinar: IP and Artificial Intelligence
Live streaming available

10 APR 2025
Training and workshops
Transaction Based Growth SUMMIT: "Build-to-Sell"
Live streaming available

15 APR 2025
Training and workshops
EU - Webinar: IP for Future and Emerging Technologies
Live streaming available

23 APR 2025
Training and workshops
EU - Webinar: IP and Artificial Intelligence - Advanced
Live streaming available

29 APR 2025
Training and workshops
EU - Webinar: IP Commercialisation and Licensing
Live streaming available

06 MAY 2025
Training and workshops
EU - Webinar:IP Commercialisation & Licensing - Advanced
Live streaming available

13 MAY 2025
Training and workshops
EU - Webinar: Patents and Innovation
Live streaming available

20 MAY 2025
Training and workshops
EU - Webinar: Freedom to Operate
Live streaming available

Thank you!

- www.ec.europa.eu/ip-helpdesk
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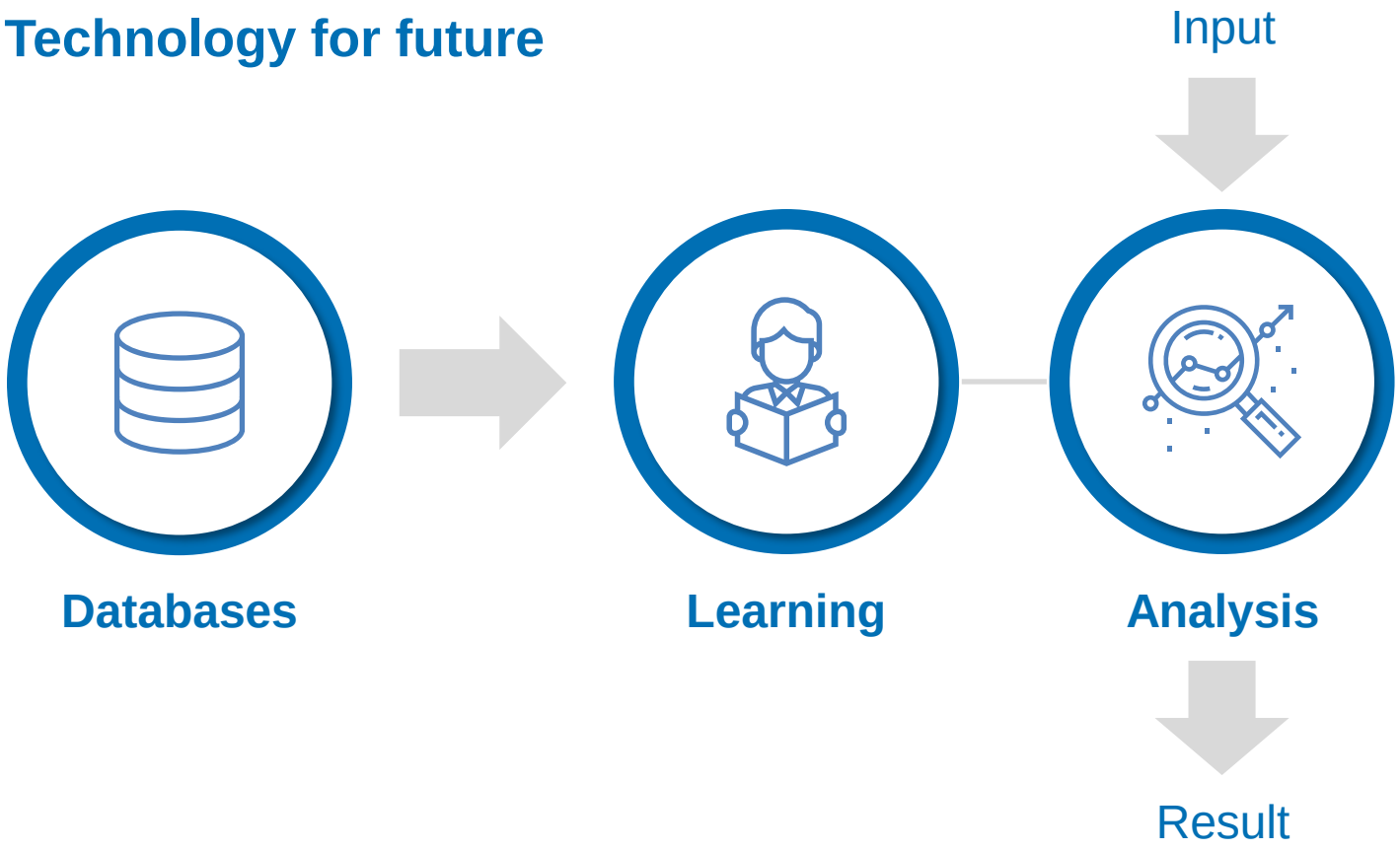
Artificial Intelligence

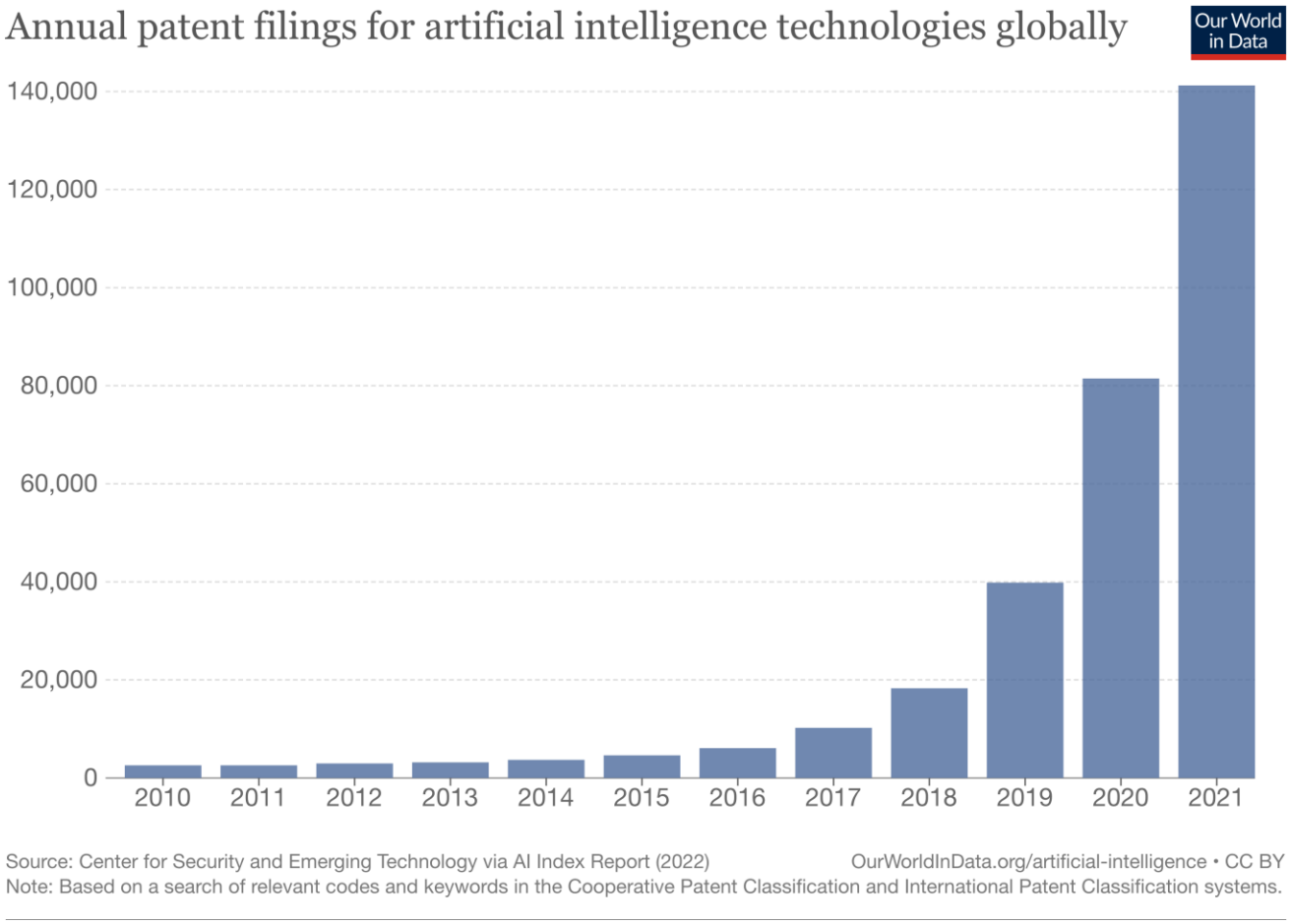
What do we mean?

Technology for future



Picture source: Istock.com

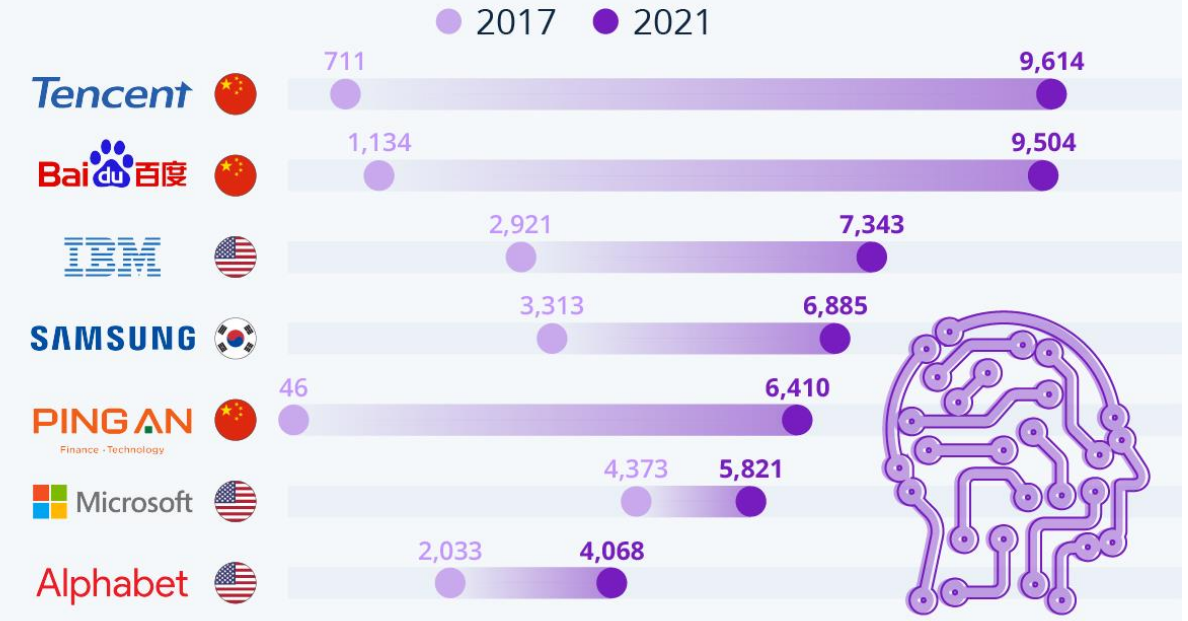
Increase in Patent Applications



Picture source: Freepik.com

The Companies Holding the Most AI Patents

Number of active AI and machine learning patent families held by company*



* Largest owners in 2021

Source: LexisNexis PatentSight

statista

European AI Act

- Common regulatory and legal framework
- Agreed by Parliament and Council
- Parliament amendment on IP
- Entered into Force 2024

Picture source: Freepik.com

IP and Artificial Intelligence

Data ownership

Database Rights

Contractual Rights

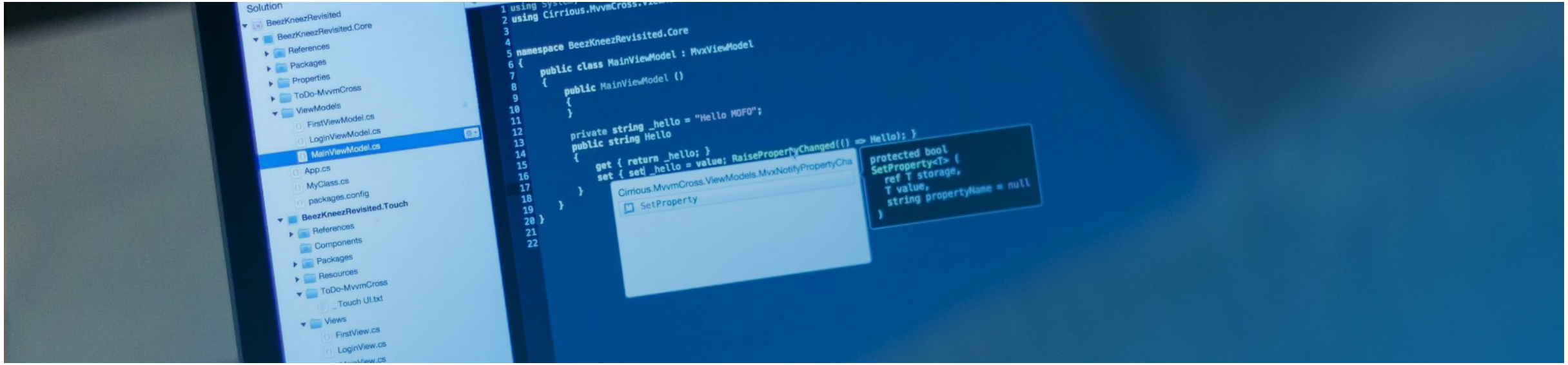
Patents

Picture source: Pixabay.com

Data Rights and Ownership

Picture source: Freepik.com

Who owns data?



Can we really talk about “ownership”?

Different countries have different legal concepts

European Commission has proposals for several data related acts, including a Data Governance Act (applicable from September 2023)

Picture source: Freepik.com

Copyright

Picture source: Freepik.com

Copyright Ownership

Level of Creativity Required for Copyright Protection

Data per se will not have this level

Software is protected – under Berne Convention

Picture source: Freepik.com

Database Rights (Europe)

Picture source: Freepik.com

Protects collection of data

€

Excludes machine generated data

Not individual data items

Picture source: Freepik.com

Contracts

Picture source: Freepik.com

Contractual Arrangements

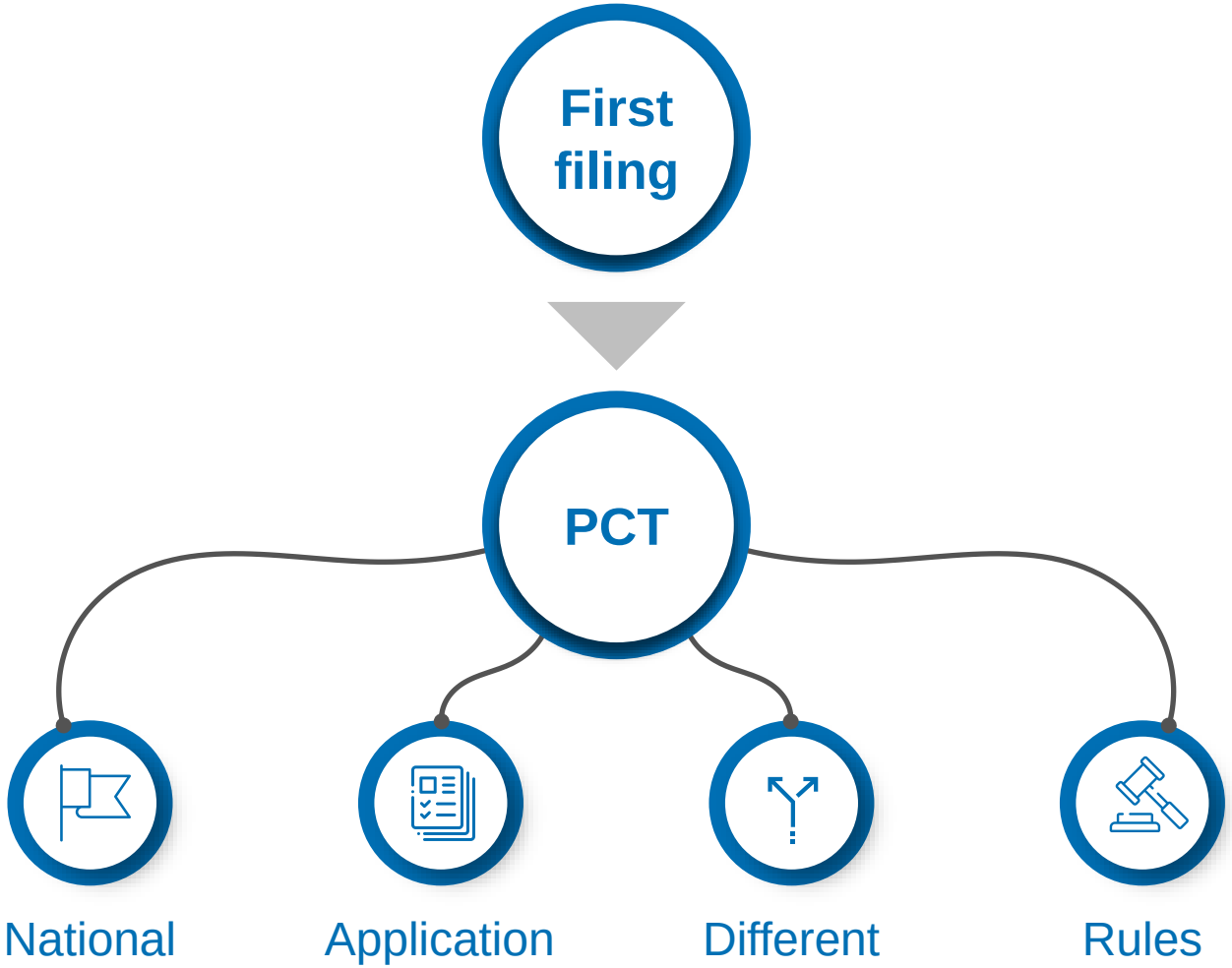
- Use of input data
- Curation of data
- Exploitation of data
- Exploitation of results

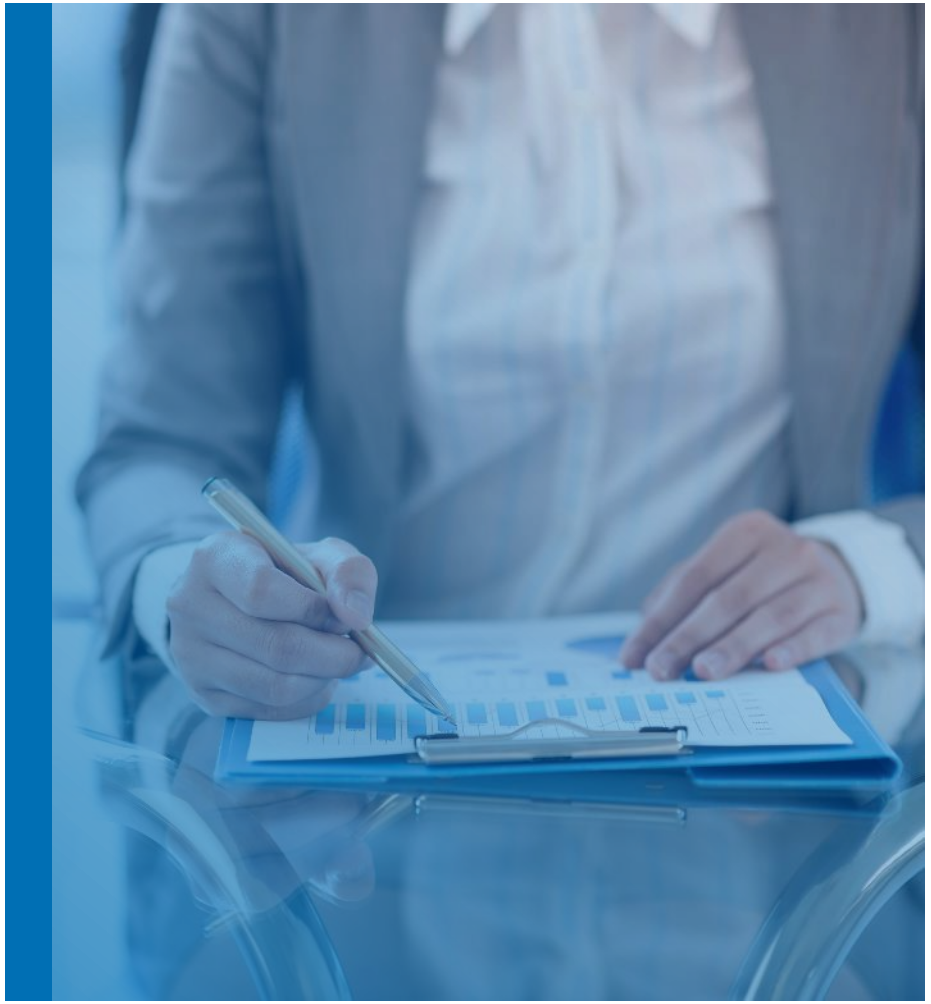
Picture source: Freepik.com

Patent Rights

Picture source: Freepik.com

Filing a Patent Application





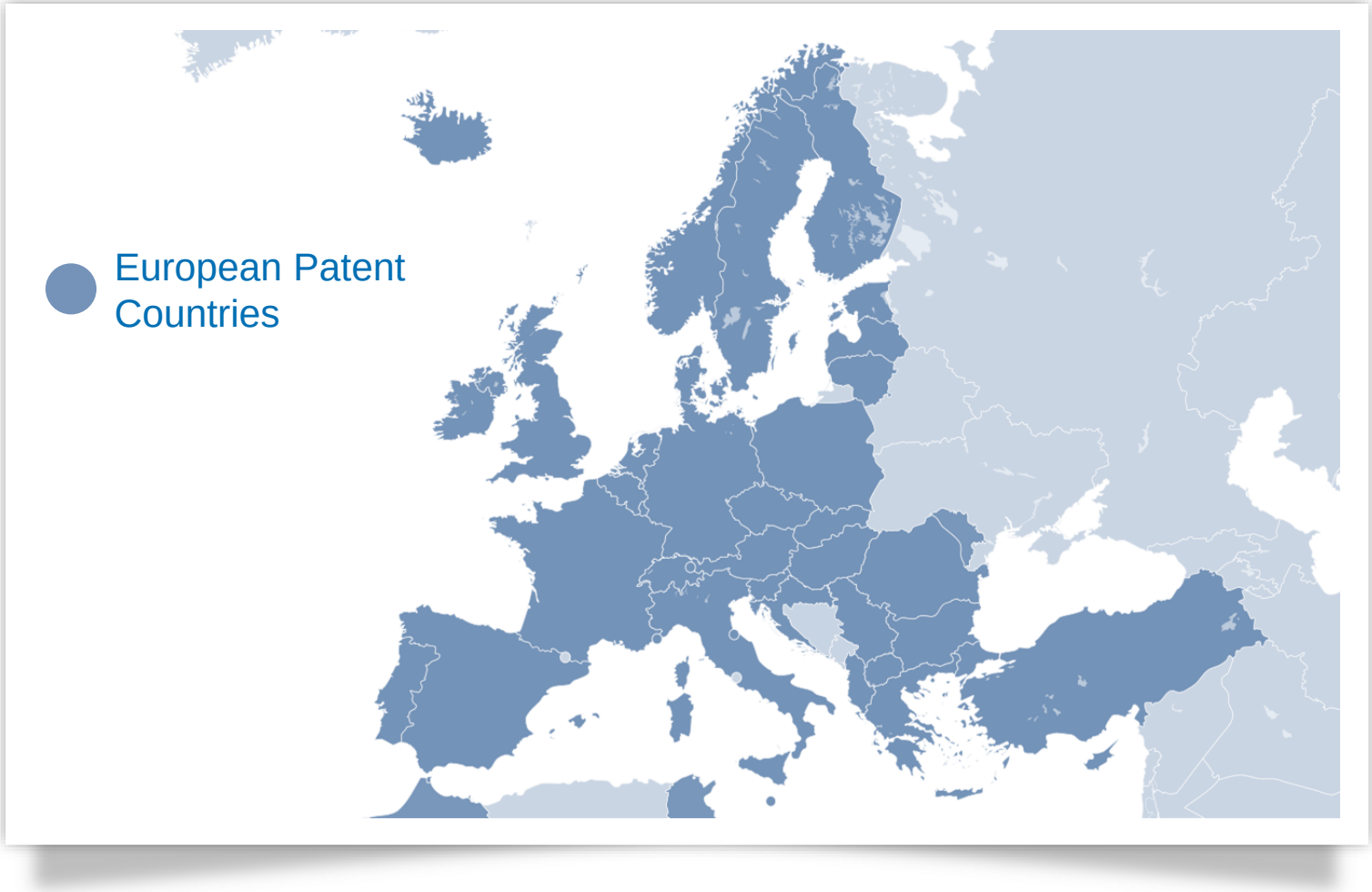
Picture source: Freepik.com

National Rights

- Different countries treat AI differently
- AI is often seen as software-based
- US – rejects “abstract idea” §101 rejections
- EU – “software excluded form patents per se”

Picture source: Freepik.com

Focus on Europe

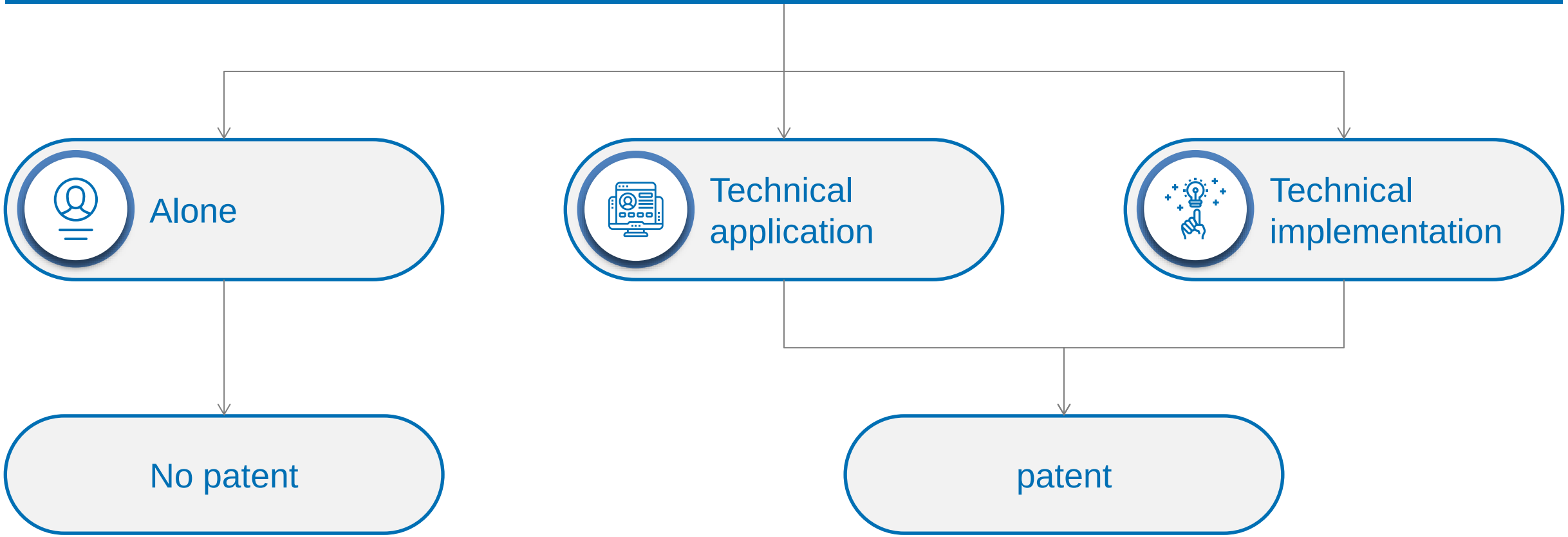


Picture source: European Patent Office

Picture source: google.com/maps

II. Guidelines for Examination of AI in the EPO (latest update 2025)

Examined as inventions involving **mathematical methods**



Technical Application

First Case – Technical Application of a mathematical model

Use in monitoring equipment, such as a heart monitoring device for identifying irregular heartbeats;

Controlling a specific technical system or process, e.g. an X-ray apparatus or a steel cooling process;

Digital audio, image or video enhancement or analysis, e.g. classifying, de-noising, detecting persons in a digital image, estimating the quality of a transmitted digital audio signal;

Separation of sources in speech signals; speech recognition, e.g. mapping a speech input to a text output; or

Providing a medical diagnosis by an automated system processing physiological measurement.

This technical purpose must be specific

Technical Implementation

Second Case - Technical Implementation of a mathematical model

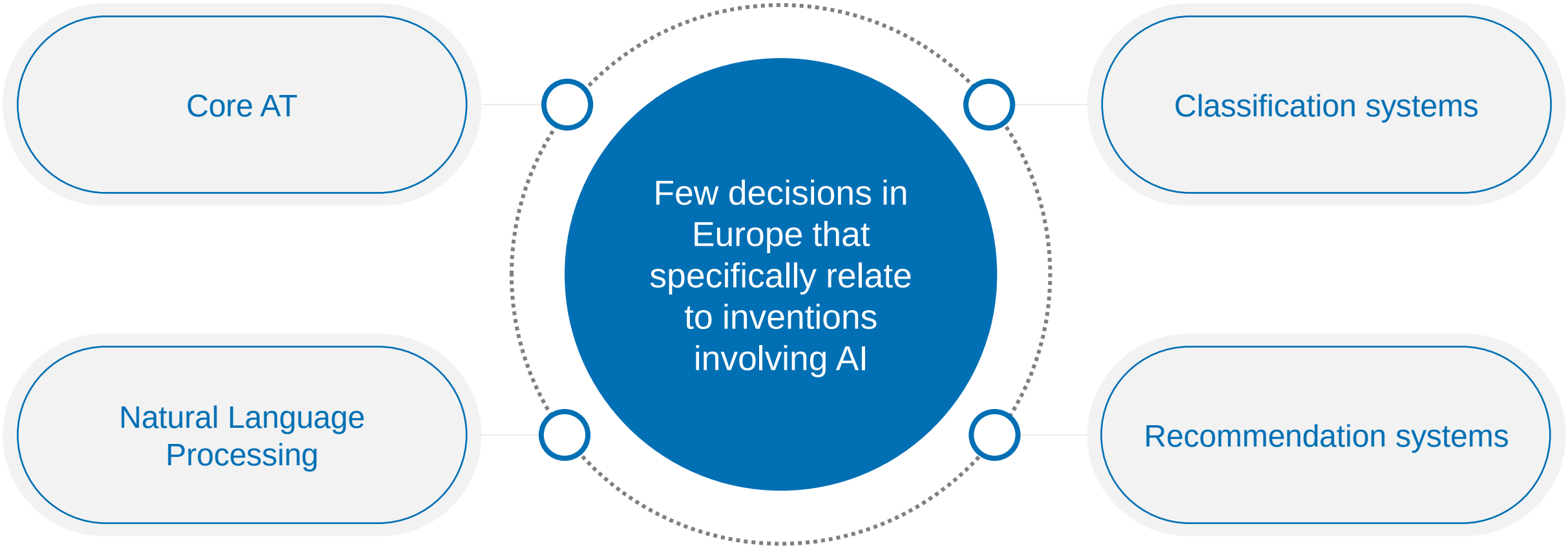
Mathematical method is **particularly adapted** for that implementation.

Data collection

Interaction between hardware elements to collect the data

Picture source: Istock.com

Patentability of Some AI Technologies



Core AI

Fundamental building blocks of AI and machine learning, as opposed to the applications of AI

Difficult to file patent applications on innovations in this “Core AI”. EPO considers it not to be “technical”.

Overcome by specifying in detail

- Implementation of the system
- Application of algorithm

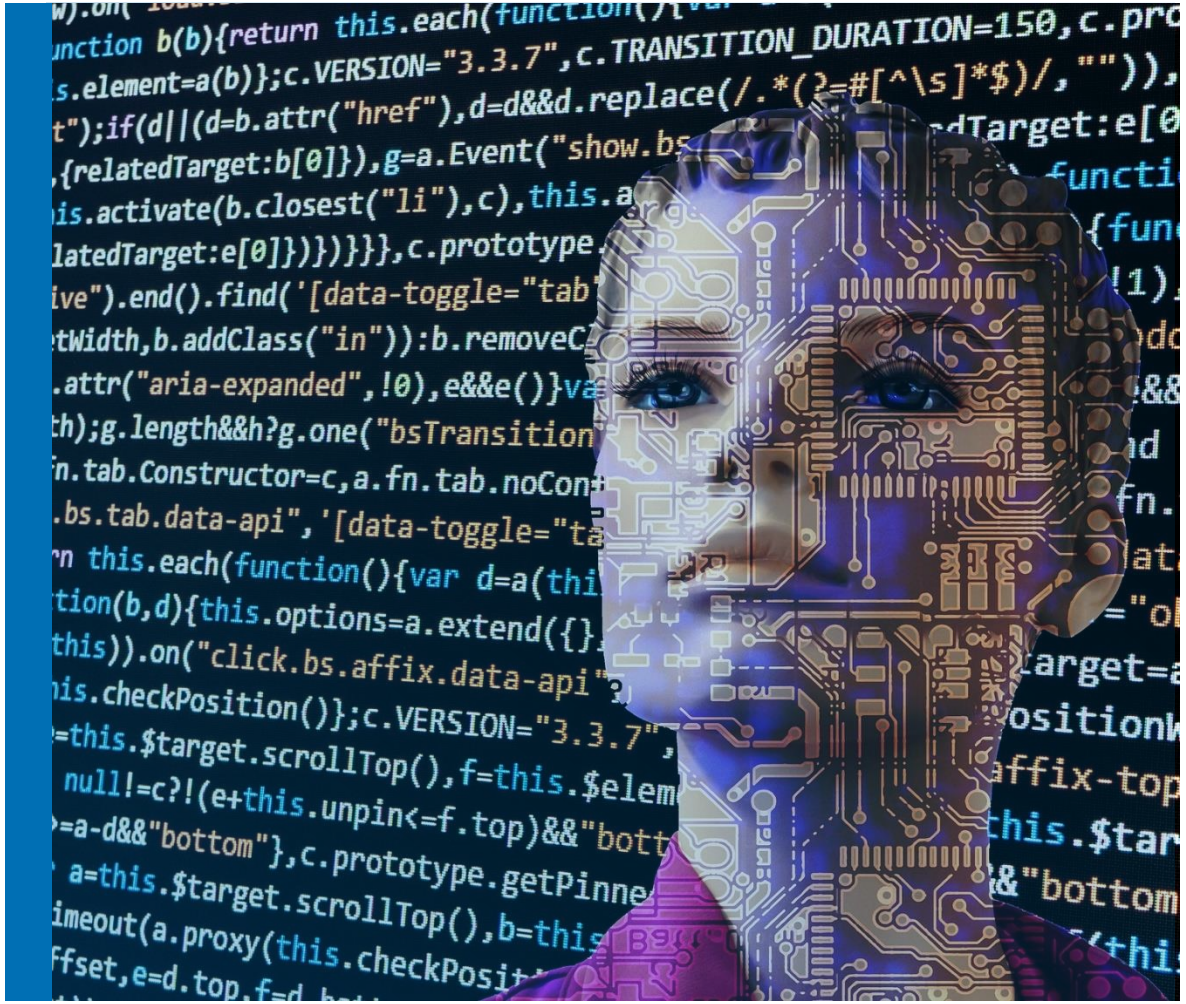
Picture source: Pixabay.com

Natural Language Processing

Allows a computer to interpret inputs, and to generate outputs, in languages such as English, German or Japanese.
Example – Amazon's Alexa System

These virtual assistants use a range of NLP techniques, such as

- Speech recognition to transcribe a user's speech into text
- Natural language understanding;
- Natural language generation to produce a response.



Picture source: Pixabay.com

EPO considers some NLP techniques to be more patentable than others

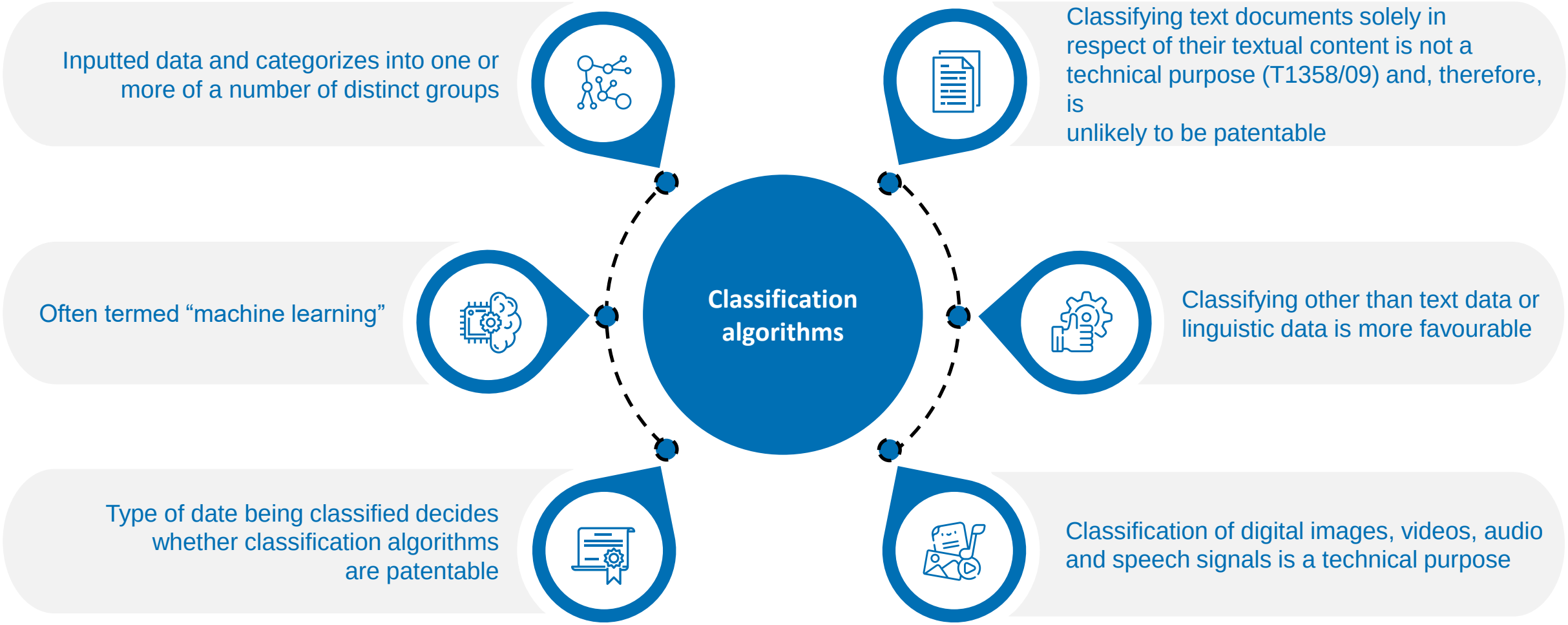
Speech recognition, which the Guidelines expressly recognize as a “technical purpose” is readily patentable

Natural language understanding or comprehension, is considered more difficult to patent

NLP is not a recent technology and the difficulties in patenting NLP, and other technologies involving linguistics, are longstanding

Picture source: Istock.com

Classification Algorithms



Recommendation Systems

Recommendation systems provide suggestions for content that is likely to be of interest to a particular user

Book selling websites often employ a recommendation system to suggest new books that a reader might enjoy

amazon.com

Great commercial significance but extremely difficult to patent

Picture source: Freepik.com

Claiming AI-Related Inventions

AI-related inventions may have three potentially patentable aspects

Generating training data for use in training a model, such as an artificial neural network;

Training the model using the training data (machine learning); and

Using the trained model to analyze new data

Each of these aspects should have separate independent claims

Picture source: Istock.com

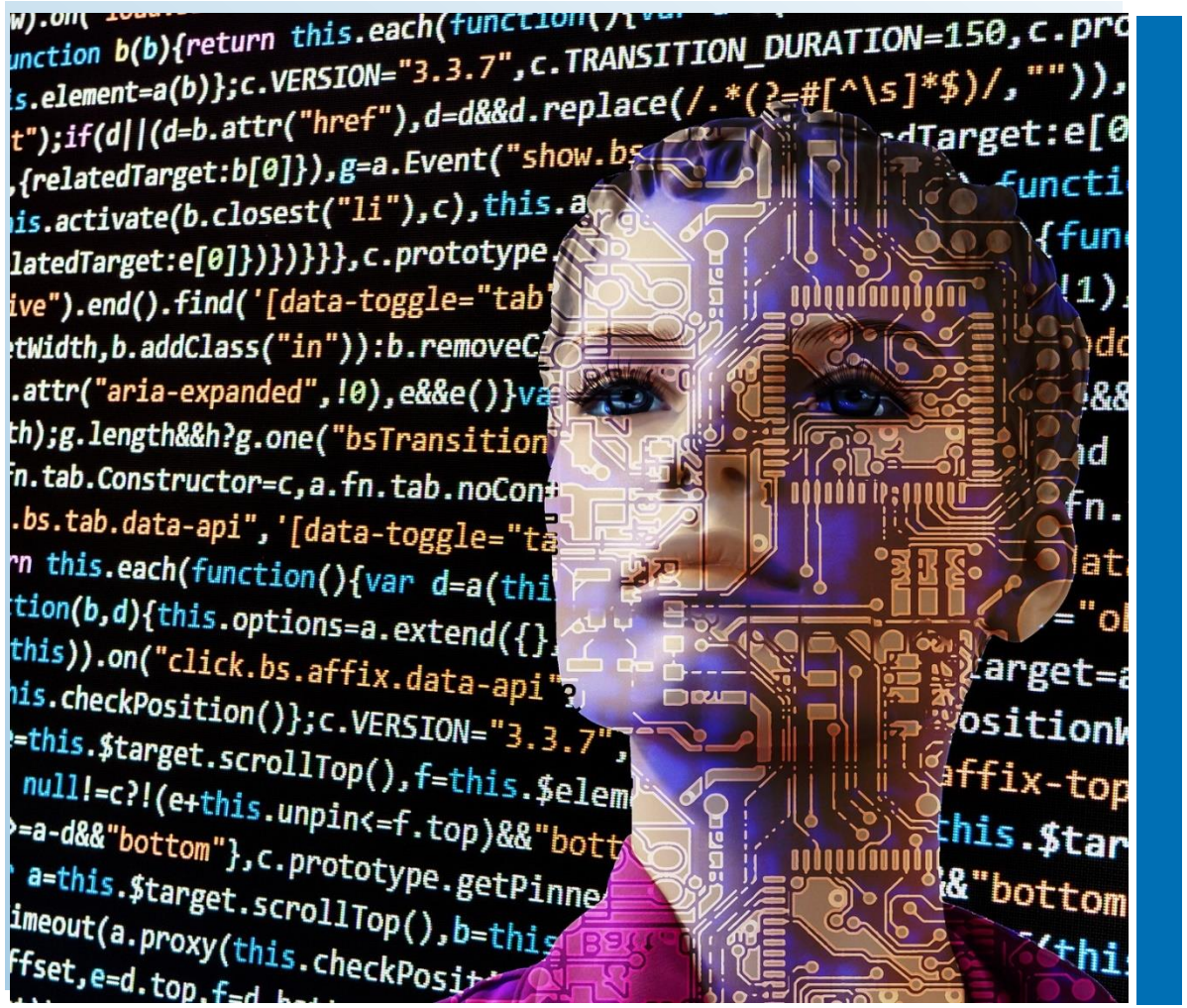
Trained model may be difficult to define in concrete technical terms

"Product-by-Process" claim
e.g., Emotional Perception

Even if a product-by-process claim is not allowable, a well-drafted claim to a method of training a model will confer protection on the model itself under Article 64(2) EPC

Picture source: Freepik.com

Inventive Step



Not “could” the skilled person arrive at the invention but “would” they do so?

- Large number of parameters
- No obvious relationship
- Human selection of training parameters

Problem-Solution approach is required
Solution must be in the technical sphere

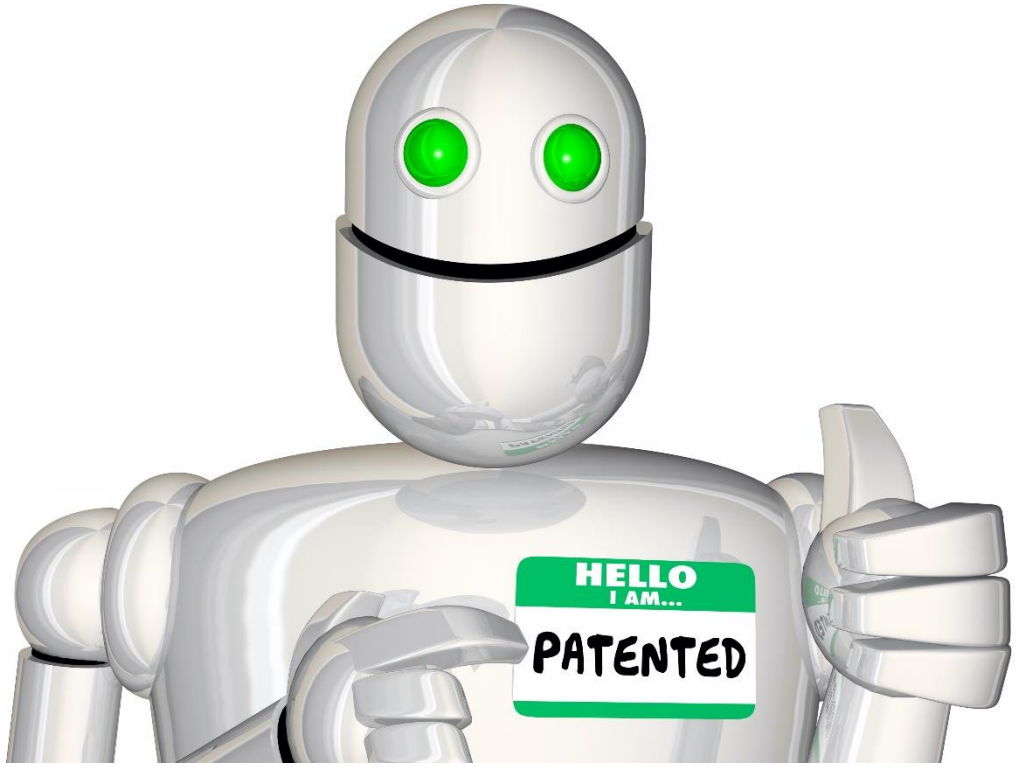
Picture source: Freepik.com

AI as Inventor or Creator

EPO US UK : No (EPO - J0008/20)
South Africa: Yes
Germany: No – but include in description

US Copyright Office: Creator must be a human being

"…the inventor designated in a European patent must be a natural person … the understanding of the term inventor as referring to a natural person appears to be an internationally applicable standard, and that various national courts have issued decisions to this effect."



Picture source: Adobe

ChatGPT

IP and other legal issues from massive language models

Uses copyrighted information + non-copyrighted data

Produces useful and useless information

Liability?

Many unanswered questions

Picture source: Istock.com

Conclusions – Protection of AI Innovations

Data can be protected

Copyright for programs

Patenting possible if you can describe problem-solution approach

Picture source: Istock.com

Contact

Thanks!

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Picture source: Freepik.com