

# Prohibition of discrimination in digital space: comparative analysis of regulations on automated processing of data

The objective of my research project is to conduct an analysis of regulatory challenges linked to tensions between two values systems, namely values protected by the intellectual property law and values protected by the regulations concerning privacy protection.

The solutions, based on algorithms, which determine the rules of personalizing the services offered to individuals, are protected by intellectual property rights.

**It is crucial to set out legal standards of applying the prohibition of discrimination, while using technologies based on automated data processing.**



```
def health_insurance():  
    time.sleep(2)  
    print("Dear Sir/Madam, welcome to our Improved Public Insurance Programme (IPIP).")  
    time.sleep(4)  
    print("Due to regulation 679/2016 we are obliged to obtain your explicit consent for processing your personal data.")  
    time.sleep(4)  
    print("The goal of the processing is to ensure the highest quality and effectiveness of IPIP.")
```

As presented by C. O'Neil (O'Neil 2016) the areas in which automated solutions can and begin to be implemented in developed countries include, among others: the recruitment processes, determining access to education, insurance and healthcare services, or credit scores. The range of service providers involved in the process of ever-growing automatization and algorithmization broadens its scope.

O'Neil C., *Weapon of Math Destruction. How Big Data Increases Inequality and Threatens Democracy*, Nowy Jork 2016



From the perspective of individuals who are subjected to automated decision making, the occurring discriminatory practices **raise number of doubts regarding compliance of implemented solutions with privacy protection rules and the prohibition of discrimination.**

However, the economic meaning of algorithms is strictly linked to the innovativeness of the solutions which they provide and develop. They guarantee advantage over other entrepreneurs.

It leads to difficulties concerning possibilities of successful implementation of the *right to explanation*, as it interferes with the economic interests of given companies.



```
print("Do you agree to the terms of the service [ YES / NO ]: ")
choice1 = input("> ")
if choice1 == "NO" or choice1 == "no":
    print("Without the consent we are not able to proceed and you will not be qualified for the IPIP.")
    time.sleep(4)
    print("Please, enter YES in order to proceed.")
```

In the law of the European Union the most profound example of legislation referring to the automated individual decision-making based on personal data, including profiling, is the regulatory framework created by the General Data Protection Regulation (GDPR).

Due to discussion in the legal doctrine, which has sparked as the result of preparing the GDPR, a research problem has appeared concerning the presence of the **right to explanation** in this legal act (Wachter, Mittelstadt, Floridi 2017).

Wachter S., Mittelstadt B., Floridi L., *Why a Right to Explanation of Automated Decision-Making Does Not Exist in the General Data Protection Regulation*, "International Data Privacy Law", 2017, vol. 7, no 2, pp 76-99



The video [algorithms\\_open\\_as\\_the\\_first\\_file.mov](#) shows an example of automated decision making.

If the *right to explanation* would be fully implemented one would be able to see the following part of the code:

```
if choice4 == "COFFEE" or choice4 == "coffee":  
    print("You are offered an insurance which costs 250 euros a month.")  
    time.sleep(4)  
    rights()  
elif choice4 == "WATER" or choice4 == "water" or choice4 == "TEA" or choice4 == "tea":  
    print("You are offered an insurance which costs 150 euros a month.")  
    time.sleep(4)  
    rights()  
elif choice4 == "JUICE" or choice4 == "juice":  
    print("You are offered an insurance which costs 175 euros a month.")  
    time.sleep(4)  
    rights()  
elif choice4 == "COKE" or choice4 == "coke":  
    print("Your are offered an insurance which costs 225 euros a month.")  
    time.sleep(4)
```



**In the example, your drinking habits are the crucial factors influencing your health and therefore determine the insurance offer prepared for you.**

Who would suspect that what you drink could be such sensitive data?

It might be the result of the big data based analysis, but how would you know, if you would not be able to know the algorithm which led to the decision?

And even if you knew the algorithm, how would you know what it actually means?

How can you be sure that your favourite drink is not correlated with your ethnicity or religion and therefore becomes personal data?

Is it not a discriminatory treatment which should not take place?



```
print("Thank you for your cooperation.")  
time.sleep(4)  
print("The information you entered is unnecessary, we already gathered it all via your social media accounts.")  
time.sleep(4)  
print("Let us proceed to the offer which has been prepared for you.")
```

Technologies used for data processing create the opportunity to implement discriminatory mechanisms, which are not transparent on the level of individual decisions. It is the effect of technically objective character of the criteria developed basing on *big data* analytics and lack of the possibility to control the algorithms which determine the content of the offer made to a particular individual. This leads to the exclusion of the collective perspective.

The collective dimension of the ongoing processes and the discriminatory mechanisms are insufficiently addressed in the regulatory framework concerning algorithmic decision making processes.



An example of a different approach towards solving such a conflict, implemented on a national level, **are regulations of credit scores in the United States**. Limited to credit scores, they are focused on strict conditions of transparency of certain elements, determining the decisions issued in individual cases.

Certain algorithms, as proved by the judgment of the Polish court, can be also treated as **public information**, which should be available to the citizens. This way of defining the algorithm-based automated decision making solutions could lead to a different model of legislative solution than the one based on data protection regulations.

*Equal Credit Opportunity Act (Regulation B of the Code of Federal Regulations), Title 12, Chapter X, Part 1002, §1002.9*

II SAB/Wa 1012/15 – Judgement of WSA in Warsaw, 5 April 2016.





```
print("In case of any objections please file a formal court complaint.")  
time.sleep(4)  
print("And see for yourself how law is helpless, when facing the algorithms and automated decision making.")
```

But is law really helpless? Since technology enables the execution of law as an element immanent to the system, the *law by design* (Hildebrandt 2015) concept and the idea which presents *code as law* (Lessig 1999) seem to gain recognition.

The GDPR implements *privacy by design* rule as one of the most fundamental rules. It is an evidence of the possibility, or maybe a necessity, for legal theory studies to inspire the creation of innovative regulatory solutions.

**However, the process of translating the theoretical concepts to the practically relevant acts, needs to be conducted very precisely.**

Hildebrandt M., *Smart Technologies and the End(s) of Law. Novel Entanglements of Law and Technology*, Cheltenham 2015

Lessig L., *Code and Other Laws of Cyberspace*, Nowy York 1991



# The objective of the research

**My project aims at creation of models of regulatory solutions based on the results of the analysis.**

The objective is to create the theoretical framework of coherent and complex solutions, which will address the normative challenges appearing due to the development of technologies based on algorithmization and *big data*. The results of the project could be treated as the fundamentals for formulating *de lege ferenda* postulates in terms of the legislative proposals regarding the access to services provided by the private and public sector and the right to explanation.



# If you are still not convinced...

Either run the `algorithms.py` file in your terminal...

Or copy+paste the content of `algorithms.docx` file to the console available under the following link:

<https://www.python.org/shell/>

```
print("And see for yourself how law is helpless, when facing the algorithms and automated decision making.")
time.sleep(4)
print("Wanna check it for yourself?")
time.sleep(3)
print("Download algorithms.py file annexed to the e-mail...")
time.sleep(3)
print("Enter your terminal...")
time.sleep(3)
print("and open the algorithms.py file.")
```

