



CODE OF ETHICS AND CONDUCT

Preamble

[DSPA](#) – Data Science Portuguese Association, founded in early 2018, is the first Portuguese - non-profit organization - created in the national territory in the field of Data Science, representing the increasing criticality and impact of this sector on both personal and social lives, as well as on corporations and public entities.

The purpose of DSPA is to *To Empower Data Science for a better World*. To that end, the DSPA serves as a platform to foster dialogue in the field of Data Science on a national and international level. To that end the DSPA has the following objectives:

- Strengthening the Data Science competences developed in Portugal by various actors;
- Transforming the country into one of the world's leaders in the advancement of knowledge;
- The creation of an industry-wide value chain, boosting and leading critical issues such as ethics and regulation; and
- The coordination between the various quarters of civil society all of which very relevant impacts on the lives of people, businesses, society and the national economy.

As mentioned, one of the main objectives of the DSPA is the promotion of Regulation, Ethics and Safety in all activities relating to Data Science. To that end, we have developed a set of principles and norms to guide the activity of Members of DSPA, and all those who, not being Associates, wish to adopt the best ethical principles and practices conduct in Data Science.

This Code is without prejudice the application of applicable legislation, the General Data Protection Regulation and the Personal Data Protection Law.

Chapter I – General Provisions

Article 1º

Scope

1. This Code of Ethics and Conduct (hereinafter "Code") is intended for singular or collective persons that are associated with the DSPA (hereinafter, "Associates"), as well as to data science professionals (hereinafter "Professionals"), with respect to any activity, regardless of the type of data processing operations without prejudice to paragraph 2 of this Article.
2. The Code is intended to be an instrument for disseminating best practices in data science, being of optional application for both associates or members of other collective or individual entities, public or private, wishing to adopt it.
3. The DSPA Board will periodically review the adoption of the Code and take the steps it deems necessary to expedite its disclosure, considering the opportunity to make the Code mandatory for Members.

Article 2º

Object and Purpose

1. The Code defines a set of ethical principles and conduct norms applicable to all Data Science activities.
2. The Code aims to establish good practices in data science and thereby contribute to:
 - a) Promote and Value the ethical component associated with Data Science
 - b) Develop the Data Science sector responsibly and sustainably
 - c) Contribute to the appropriate professional development of Data Scientists
 - d) Strengthen widespread public confidence in Data Science; and
 - e) Disseminate relevant information and stimulate the discussion of topics related to the activity and sector of Data Science.

Article 3º

Definitions

For the purpose of this Code, the following terms are defined as:

- a) "Data": any basic tangible or electronic record of raw information (measurements, statistics or information which, whether structured or unstructured, can be transferred, stored or processed digitally) used as a basis for processes or operations and which has to be processed or analysed for meaning;
- b) "Information": set of organized data, with an understandable meaning within its application context, used as a basis for thinking, discussion, or decision-making;
- c) "Knowledge": proven information through scientific evidence that creates or is used to create meaning, conclusions or ideas;

- d) "Data Science": multidisciplinary area that, through scientific methodology, processes and algorithms, processes, organizes, manipulates and transforms Data or Information with an objective to create Knowledge (to interpret data for decision-making purposes);
- e) "Data Science Professionals" or "Professionals": professionals whose activities relate to Data Science for the production of Knowledge from Data or Information;
- f) "Organisations": entities with legal personality, public or private, profit or non-profit, containing an administrative and functional structure;
- g) "Ethical Governance": the establishment and regular review of practices aimed at implementing ethical principles, including measures mitigating the risk of injustice or discrimination and ensuring transparency, quality and integrity of data and methods associated with data science;
- h) "Correlations": any statistical relationship or interdependence of two or more variables, with or without causality;
- i) "Spurious Correlations": a correlation of two or more variables in which there is no causality or direct relationship between them, but of their relationship with other variables.

Article 4º

Fundamental Ethical Principles

1. Data Science activity is governed by the following fundamental ethical principles:
 - a) Use resources, experience and knowledge in the pursuit of the improvement of humanity through Data Science;
 - b) Respect human dignity, as expressed in the Universal Declaration of Human Rights;
 - c) Strive for freedom of expression and act without any kind of discrimination based on criteria of race, gender, disability, sexual orientation, political or ideological convictions, religion, education, marital status, geography or others;
 - d) Comply with adopted European and Portuguese privacy and processing of personal data legislation, adopting best practices accordingly;
 - e) Share, collaborate, promote and develop Data Science with the market, schools, government, municipalities, communities and associations that can benefit from it;
 - f) Investigate, analyse, validate, explain and share, free of charge, information, models and data aimed at a better understanding of humanity and increasing the quality of life of people and societies.
 - g) Always strive for the advancement of Knowledge, based on an eclectic and complementary vision of the different Sciences.

Chapter II – General Duties of Conduct

Article 5º

Diligence and competence

1. Professionals must act diligently and with reasonable competence required of Data Science practitioners.
2. Professionals must ensure they have the necessary technical knowledge, skills and training for the context of the services provided by them.

Article 6º

Communication with clients

In the context of their communications with clients, professionals should, in particular:

- a) Present previous experience and qualifications in an honest and upstanding manner that allows the customer to verify it;
- b) Agree with the client the objectives of the services to be provided, as well as the methods that will be used in the pursuit of the proposed objectives;
- c) Provide all information reasonably requested by the customer;
- d) Mediate with the client about the risks, current, potential or hidden, related to the use of the results obtained through Data Science; and
- e) Inform the client of any limitation that restricts their performance if the client requests the performance of illegal tasks or contrary to this Code, as well as refusal to perform such tasks.

Article 7º

Confidential Information

1. Professionals must recognize the importance of ensuring the security and confidentiality of all reserved information that they create, develop, receive or manage anyhow.
2. Professionals shall protect, from the initial moment they receive it, all confidential information they handle, regardless of their support or format, to when they return and/or delete such data (when applicable).
3. Professionals should make reasonable efforts to protect confidential information they deal with, including:
 - a) Restrict access to confidential information transmitted to them only to persons strictly necessary for the performance of the task entrusted by the client;
 - b) Only communicate confidential information to customer employees;
 - c) Not discuss or analyse confidential information in public places or in the presence of persons who should not have to access such confidential information; and
 - d) Ensure the security and confidentiality protection of information even after the closure of the business partnership with the client, and proceed the return or deletion of confidential information, as soon as the reason that determined its transmission ceases (must document the actions taken to comply with this provision).
4. The technical and organisational measures to be implemented in this context should be appropriate, considering the characteristics of confidential information and the context of the task entrusted, including:
 - a) Pseudonymization and encryption of confidential information;
 - b) The ability to ensure permanent confidentiality, integrity, availability and resilience of services and treatment frameworks used;
 - c) The ability to restore availability and access to data in a timely manner in the event of a physical or technical incident; and
 - d) A process for regularly testing, assessing and evaluating effectiveness of technical and organisational measures to ensure safety of the data processing carried out.

Article 8º

Conflict of Interests

1. Professionals shall not provide services where such provision implies a conflict of personal interest.
2. For the purpose of this Code, a conflict of interest exists if:
 - a) The services to be provided to a customer directly harm another customer; or
 - b) There is a significant risk that the provision of services will significantly limit the fulfilment of their duties to other customers or former customers.

Article 9º

Relationship with Potential Clients

1. For the purpose of this Code, a potential customer is any person who consults a Professional about the possibility of initiating a business relationship.
2. The ethical principles and standards of conduct set out in this Code apply to relationships with potential customers, with potential adjustments.

Article 10º

Activities proof collection

1. Professionals shall ensure the retention, in written, tangible or electronic form, of evidence relating to the data processing activities carried out, in order to allow the analysis and proof of the processing activities carried out.
2. The obligation provided for in the preceding paragraph should preferably be fulfilled by maintaining a "logbook", which includes the following information:
 - a) Data processed and its origin;
 - b) Activities carried out and methods employed;
 - c) Relevant material of data modelling that occurred during the processing;
 - d) Results and discoveries produced during the project;
 - e) Restrictions on the scope or within the obtained results;
 - f) Analysis of the performance of models and algorithms used; and
 - g) Applications proposals for the obtained results or additional research needed.
3. Where data processing activities are carried out by collective persons, the logbook, as well as any other evidence-keeping support, shall be the legal property of such collective person.

Chapter III – Specific Conduct Duties

Article 11º

Data Scope

In strict compliance with applicable law, Professionals must use diverse data and with proportional quantity to the specific needs of their work, ensuring compliance with the legislation in force, in particular to the processing of personal data.

Article 12º

Data Quality

Taking into account that insufficient or uncertain data quality may compromise the results obtained by the application of Data Science methods – in particular by promoting an illusion of reality understanding that may adversely affect the quality of decisions supported by it - the Professional has the following obligations:

- a) Take into account the source of the data used, which should be reliable, legal and relevant to the Data Science process;
- b) Strive for the absence of limitations and defects on the data used in the design of its work of Data Science;
- c) Strive so that the data used do not have bias, often arising from historical reality, avoiding any results with conditionalities
- d) Do not use data that by its limitations, defects or biases, may impair the final quality of its work of Data Science, which may convey a false reality or promote an illusion of false understanding of reality;
- e) Inform the beneficiary of the data science work designed of the quality of data used and the potential consequences.

Article 13º

Methodology integrity

The Professional must be diligent with the design, creation and implementation of methods and algorithms in order to avoid the occurrence of damage to individuals and communities, in particular:

- a. Master the methods and algorithms used in order to avoid unsatisfactory results;
- b. Be righteous, responsible and objective in the use made of methods and algorithms, not forcing results that you want to achieve by the honesty of any less clear intervention;
- c. Be clear and transparent on the working methods and/or algorithms used.

Article 14º

Transparency and Interoperability

Data Science processes are increasingly sophisticated and complex in the search for patterns and profiles, often difficult to understand by the human brain. In this sense, it is up to the Professionals to ensure that, regardless of the level of complexity, the models developed are transparent and the results auditable/reproducible, in particular Professional shall:

- a) Ensure maximum possible transparency in the design of their work, by promoting the explainability and intelligibility of the models and systems designed, as well as the methods used;
- b) Avoid reckless use of Data Science and prevent negative impacts on individuals and communities;
- c) Avoid results obtained through spurious correlations,
- d) Prioritise the design of auditable, transparent and fair models and systems.

Article 15.º

Justice and Discrimination avoidance

The collection and processing of data on individuals and communities can enable the capture of perceptions or insights that, when used in decision-making processes, have the potential to cause harm and negative impacts on the human condition. For this reason, Professionals have ethical duties of respect for the human dignity, namely:

- a) Professionals have the duty to know the end applicability of the models developed as well as how they are implemented. That way, the Professional can prevent the result of its work from promoting injustice or negative discrimination towards specific individuals or communities;
- b) Professionals must strive for the implementation of the developed models that allows future human intervention, by changing the outcome of a process or event, where justified and reasonable;
- c) Where prevention is not enough, there should be measures that mitigate the risk of injustice or discrimination.

Article 16.º

Ethical Risk Assessment and Mitigation of Potential Impacts

As Data Science evolves, increasing its expression in society, it is crucial to ensure a clear view of the risks and potential ethical impacts on individuals and communities. In this context:

- a) Data Science Professionals have a duty to carry out regular assessments of ethical risks and potential impacts at all relevant stages of their work, including in the design, creation and implementation of their work;
- b) Professionals should strive to assess and mitigate potential negative impacts that may arise from the implementation of the work they have designed and listen to the concerns of affected individuals and communities.

Article 17.º

Ethical Governance and Independent Review

At the organizational level, with more and more internal processes supported in models and algorithms of Data Science, it is essential to ensure solid Ethical Governance, namely:

- a) Organizations that use for their, or their parties, benefit the work conceived by Data Science Professionals should have as a priority the establishment of robust Ethical Governance practices, known to all members of the Organization, reviewed regularly
- b) Professionals have a duty to promote good practices as well as these ethical principles with the organizations where they work or develop activities.

Article 18.º

Right to Effective Remediation

Individuals and communities negatively affected by the application of the work conceived by the Professionals should be given the possibility of access to effective forms of remediation, preventing future similar situations from repeating.

Chapter IV – Duties to the DSPA

Article 19.º

Loyalty

Members have the duty to act in a fair manner towards the DSPA, in particular in all matters relating to the application and supervision of this Code.

Article 20.º

Collaboration

Members have the duty to collaborate with the DSPA within the framework of this Code, in particular with regard to its effective implementation.

Article 21.º

Personal or Professional Development

Members have a duty to promote their ongoing training in order to develop their technical knowledge and skills, in particular through participation in conferences and courses related to data science.

Chapter V – Code Implementation

Article 22.º

Interpretation of the Code and integration of loopholes

1. The interpretation of the Code will be the responsibility of the DSPA Board, which will also have competence for the integration of any gaps.
2. The DSPA Board may also, if it deems necessary, issue written guidance on the interpretation of the provisions of the Code.
- 3.

Article 23.º

Implementation and Supervision of the Code

1. The supervision of the Code will be carried out by the DSPA Board, without prejudice to its current optional nature.
2. During the period in which the Code is not binding for its Members, non-compliance with the respective rules shall not be punishable, without prejudice to the penalties that such conduct may entail under the DSPA Statutes.

Article 24.º

Allegation of non-compliance with the Code

1. Members may report to the DSPA Board violations of this code of which they are aware.
2. The DSPA Board may take the steps it deems necessary to analyse the complaint in question, without prejudice to the exclusive powers of the General Assembly.

Chapter VI – Final Dispositions

Article 25.º

Enforcement Period

This Code shall enter into force on the date of its approval at the General Assembly and shall have an indefinite period of validity.

Article 26.º

Code Revision

The Code may be revised at any time by resolution of the General Assembly, on a proposal from the DSPA Board.