

Laboratory of Artificial Intelligence and Data Science

Project 1 - Lung Cancer Classification using Computerized Tomography (CT) Data

To solve this project, it is important to consider ethical and legal aspects.

Personal data processing, which includes someone's health data, is strictly prohibited, unless we have consent by the individuals, the data processing will be useful in public health area and the data processing will be used in scientific research.

When carrying out a project using third-party data, it is important to make sure that the country's data protection regulations are followed, in case of Portugal, General Data Protection Regulation (GDPR). Furthermore, it is crucial to adopt measures to protect data from non authorized access, leaks and misuse. Also, it is imperative to have transparency in the research, in other words, every research aspect should be openly documented.

Our project, which goal is, using others individuals CT scans and different radiologists opinions about each CT scan, get a consensus and determine if the individual has cancer, has a huge potential to auxilie in the public health area, helping in resulting early diagnoses, less errors in the diagnoses, helping in the less medical resources places, etc. Before it is implemented on a large scale, it is necessary to make sure our project has efficacy and safety, through scientific research.

Regarding the individuals consent, the website from which we download the data used in our project (<https://wiki.cancerimagingarchive.net/display/Public/LIDC-IDRI>) makes sure the individuals consent to use their personal data in our project, to the extent that they consented to their data being made public ("The authors acknowledge the National Cancer Institute and the Foundation for the National Institutes of Health, and their critical role in the creation of the free publicly available LIDC/IDRI Database used in this study.").