

Linking Food, Nutrition and Biomedical Data for Trustworthy AI in Predictive Healthcare On-line Workshop

November 17th 2021, 12:30-15:00

In the last decades, a great amount of work has been done in predictive AI modelling of issues related to human and environment health. Resolution of issues related to healthcare is made possible by the existence of several available biomedical vocabularies and standards, which play a crucial role for understanding health information, together with a large amount of health data. However, despite the large number of available resources and work done in the health and environmental domains, there is a lack of resources that can be utilized in the food and nutrition domain, as well as their interconnections. In particular, this is important during the current pandemics of COVID-19, when food provision and security, as well as healthy nutrition and environment, are tremendously needed for quick recovery and long-term sustainable development of our societies.

In this workshop, we will provide an overview of biomedical resources (focusing on the Unified Medical Language Systems) available for performing healthcare studies. We will make a demonstration of how they can be utilized for different health studies. Next, food and nutrition AI methods and resources will be presented that can be further used to explore the relations with the biomedical concepts. Finally, an example of predicting patient diagnosis will be demonstrated using Electronic Health Records data.

Instructors: Gjorgjina Cenikj, Gordana Ispirova, Eva Valenčič, Matevž Ogrinc, Tome Eftimov and Barbara Koroušič Seljak, Computer Systems Department, Jožef Stefan Institute

The participation is free! All welcome!

Applications are accepted until Nov. 16th, 2021. More information: [Kompetenčni center CLEC \(clec@ijs.si\)](mailto:clec@ijs.si).

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Workshop content:

- Unified Medical Language System – different medical standards required to standardize biomedical data,
- FoodViz – different standards required to standardize food and nutrition data,
- Food, Chemical, Disease Knowledge Graph,
- P-NUT – predicting macronutrient values using recipe descriptions,
- Predicting patient diagnosis using Electronic Health Records.
- Take home messages.

Prerequisites:

- No programming skills required

Note: The lecture will be English.