

(UUT08) Methodology for illness detection by data analysis techniques

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Project Aim

- The research aims to develop a methodology for early detection of the signals pointing to a developing medical emergency that draws on data analytics

Project Objectives

- benchmarking analysis of ViEWS methodology to determine the time of data actuality, accuracy level for model usefulness, the requirements on the frequency of data recording, and so on;
- working with a given dataset to develop techniques for the determination of the minimum and sufficient indicators set among informative features, considering the individual characteristics of the patient when interpreting the data, the requirements for data gathering conditions;
- experiments with transferring the methodology to another dataset representing another set of vital signs data

Anticipated Outcomes

1. Publication of a joint research article
2. Dissemination of the joint research works at a relevant conference

Project Roadmap

#	Research Phase	Time Slot
1	Comparative analysis of the ViEWS methodology to determine the time of data relevance, the level of accuracy of the model suitability, the requirements for the frequency of data recording, etc.	01/20/2023 - 02/20/2023
2	Work with a given set of data to develop methods for determining the minimum and sufficient set of indicators among informative features, considering the patient's characteristics when interpreting data and requirements for data collection conditions	02/21/2023 - 03/20/2023
3	Data modeling and development of a methodology for transferring results to a data set representing another set of vital signs data (process unification)	03/21/2023 - 05/20/2023
4	Development of prototype software for modeling and data visualization for experiments	05/21/2023 - 06/30/2023
5	Preparation of conference materials	07/01/2023 - 08/31/2023

Project Deliveries

- TBD: article
- TBD: The report “A Bot-Based Self-Report Diagnostic Tool to Assess Post-Traumatic Stress Disorder” at the 18th International Conference on ICT in Education, Research, and Industrial Applications (September 18-22, 2023, Ivano-Frankivs'k, Ukraine)

Thank you for your attention!

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<https://op.edu.ua/en/international/projects/uk-ukraine-twinning-initiative-8>