Lab session 5

Machine Learning for Behavioral Data (CS-421)

March 18, 2025

Project

- Milestone 3 is due on March 21st
- Research questions, preprocessing, modeling, and evaluating method
- We encourage to be as detailed as possible.
- A review of possible Research questions

GoGymi | Project Ideas

- **Time series analysis** of students.

- Does usage of the **intelligent chatbot** lead to better learning outcomes?

- Which types of **activities** are correlated with higher obtained results?

- Which behavioral groups / clusters of users show the most or least **improvement** over time?

- Can the learning results be predicted based on **automatic analysis** of the submitted **essays**?

GoGymi | Remarks

- A larger GoGymi dataset has been uploaded. It is recommended to use it in the project.
- The user ID format in the **gymitrainer** data is different from other tables, so it can only be mapped using timestamps.

Lernnavi | Project Ideas

- Time series behavioral analysis of students.

- Next answer prediction using students' previous interactions.

- Is there a link between task difficulty and how well users perform?

- Can we find different types of learners based on how they interact with the platform? What are these types?

- Do certain feature usage patterns (theory access, forum etc.) reveal unique user needs or behaviors? Does using a feature more often help users perform better, or worse?