HACK & HEALTH

Team: MESIO

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DATASET

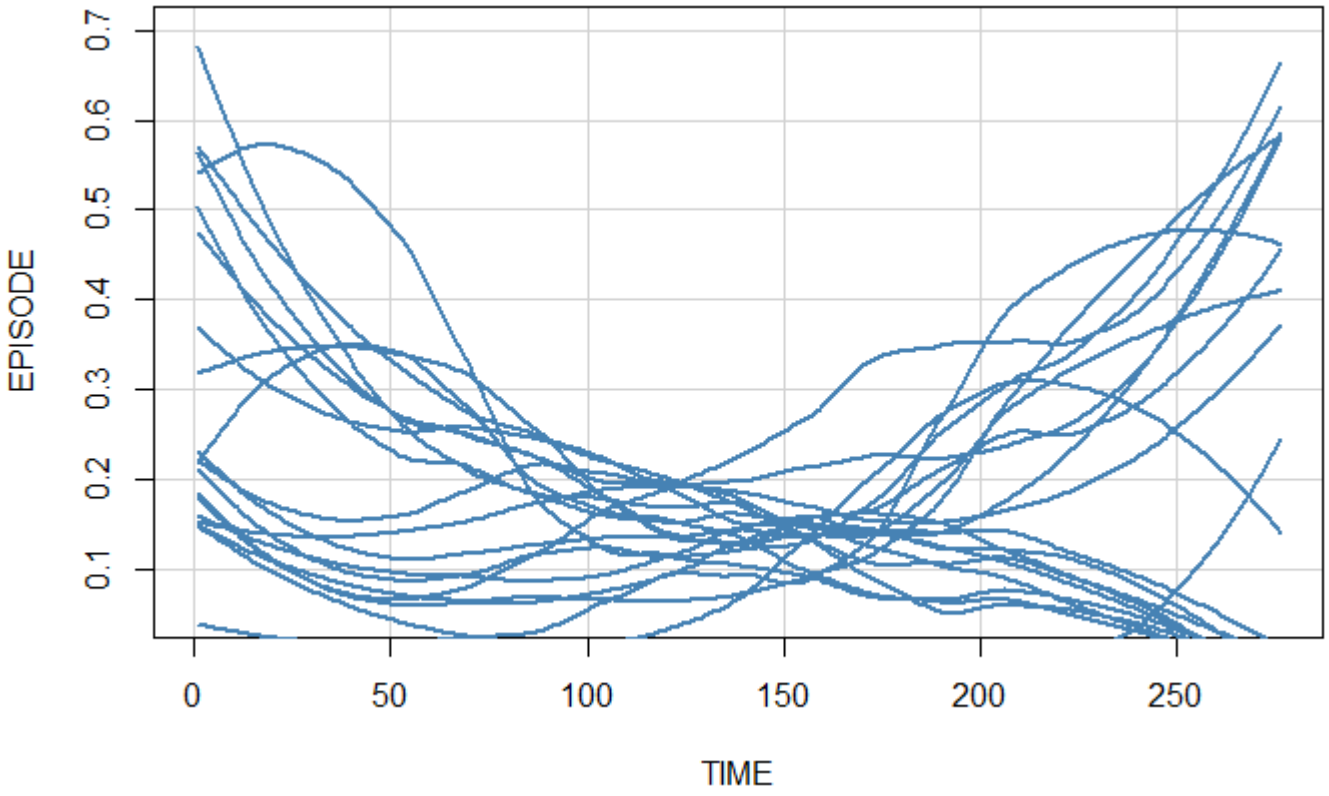
- Data taken from HealthApp.
- 30 patients with eating disorders.
- Data taken during 3 months, three times a day.
- Variables:
  - **EPISODES**: Episodes registered that time period.
  - **EMOTION**: Mood of the patient at that time period.
  - **MEAL**: Amount of food eaten that time period.
  - **ACTIVITY**: Activity done that time period.

Goals

- What do we want?
  - Give value to the data available.
- How?
  - Providing to the therapist with a predictionof the behaviour of the patient.
- Why?
  - The therapist wants to control the episodes of the patient in order to give an appropriate treatment.

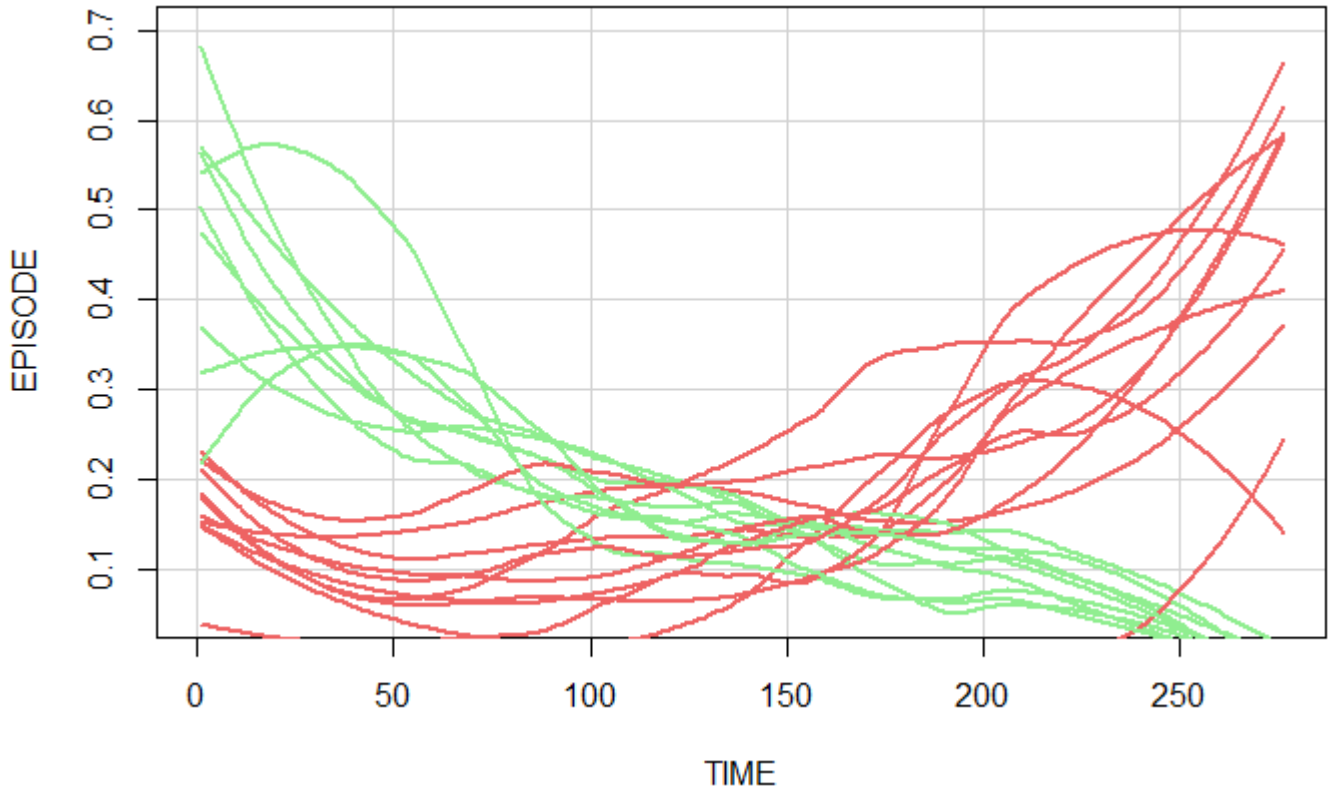
EXPLORATORY DATA ANALYSIS

Episodes of the patients during time



EXPLORATORY DATA ANALYSIS

Classification of the trends of the patients



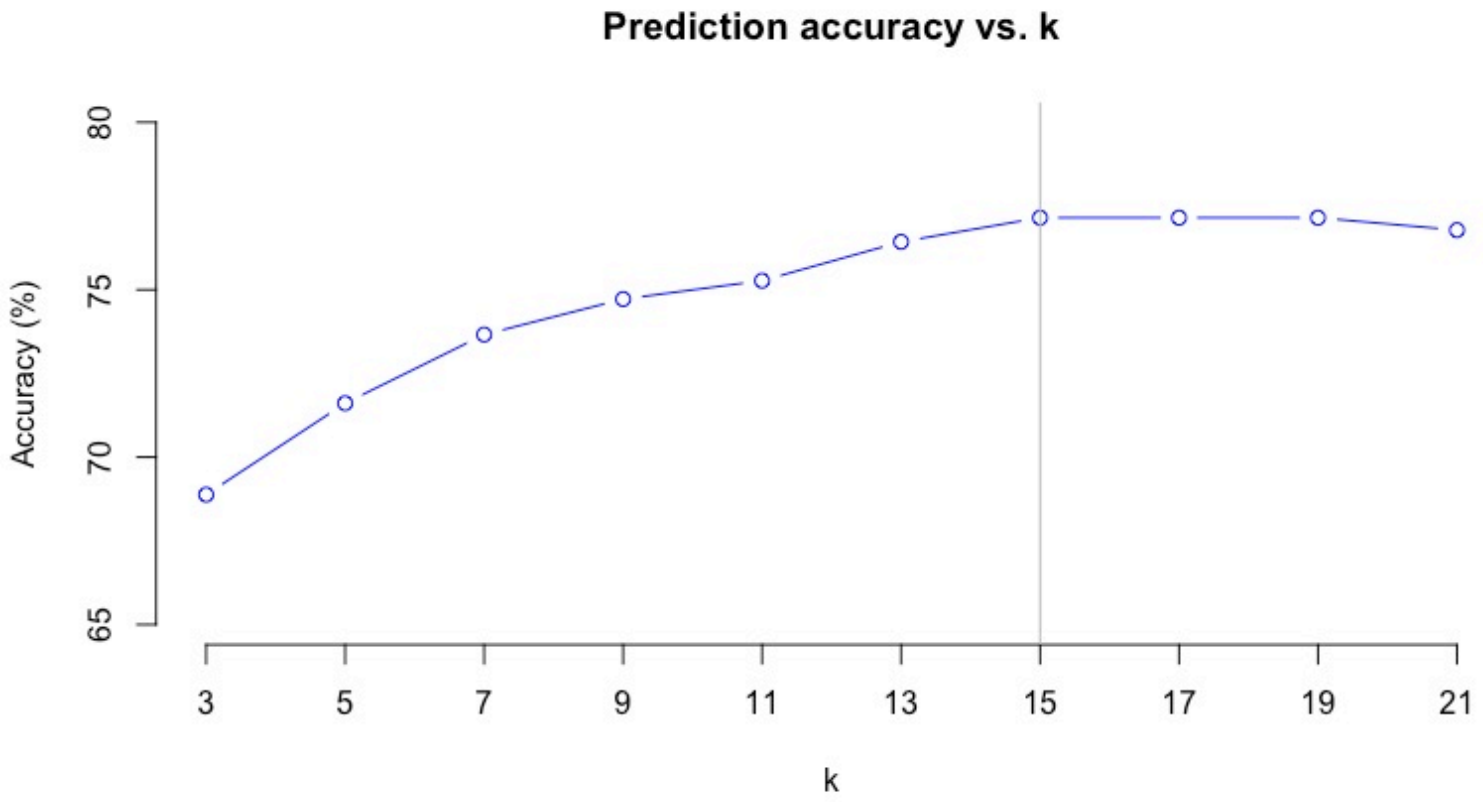
PREDICTION

PREDICTION

1. Compute new variables:
   - X: Information about the last 5 days
   - Y: Episodes the following day
2. A 80 – 20 partition of the patients is done:
   - 24 Patients for training
   - 6 Patients for test
3. Choosing the significant vairables:
   - Panel Linear Model (PLM)
   - Stepwise

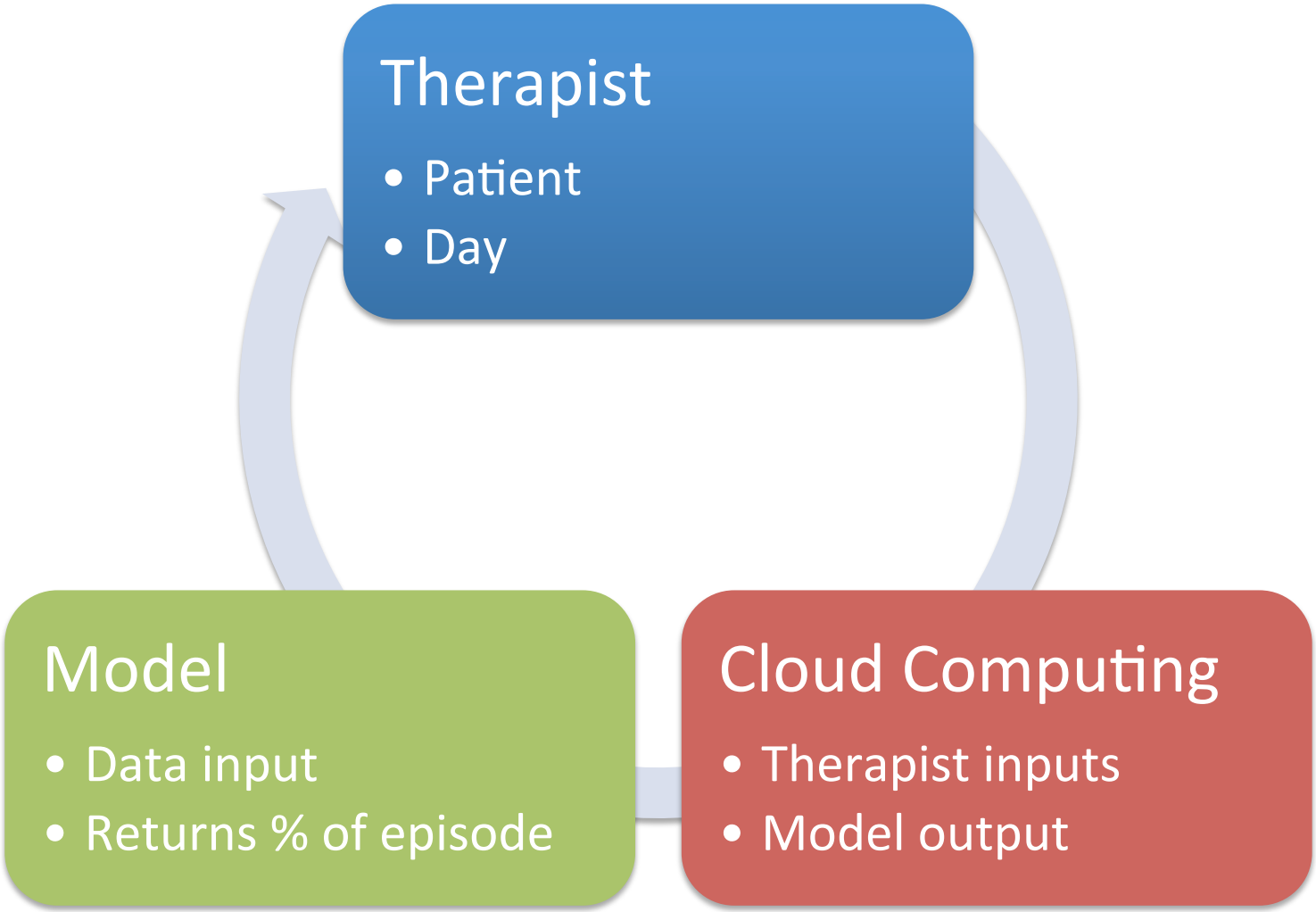
PREDICTION

4. Realization of the model: KNN, k = 15



5. Testing with test data: Success Rate of 77,15 %

PREDICTION FLOW



APPLICATION

Hack&Health App

Patient:

Patient 1

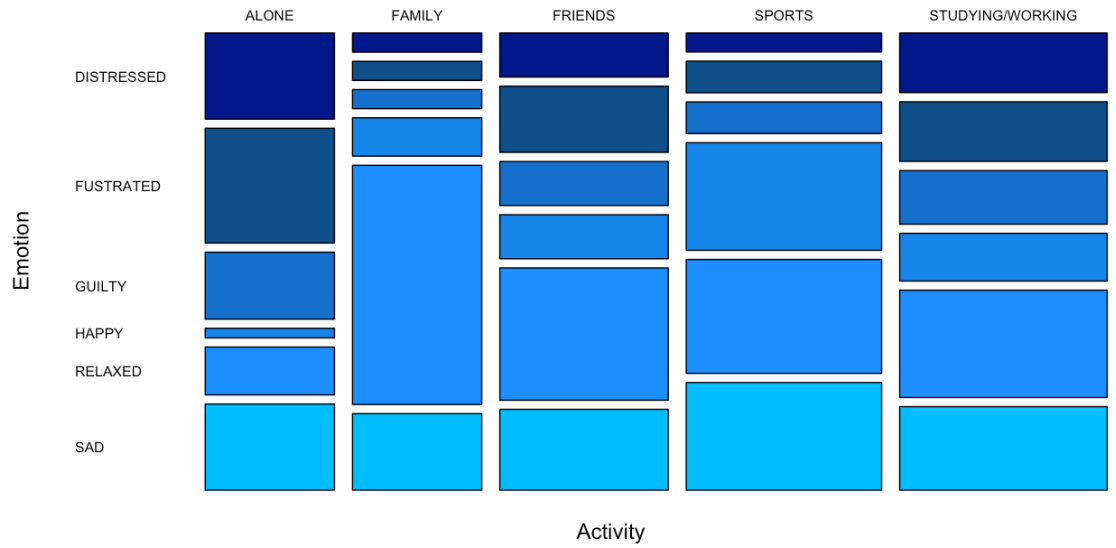
Date:

2016-01-30

Prediction:

Today this patient will have an episode with a probability of: 73.3 %.

Emotion and activity



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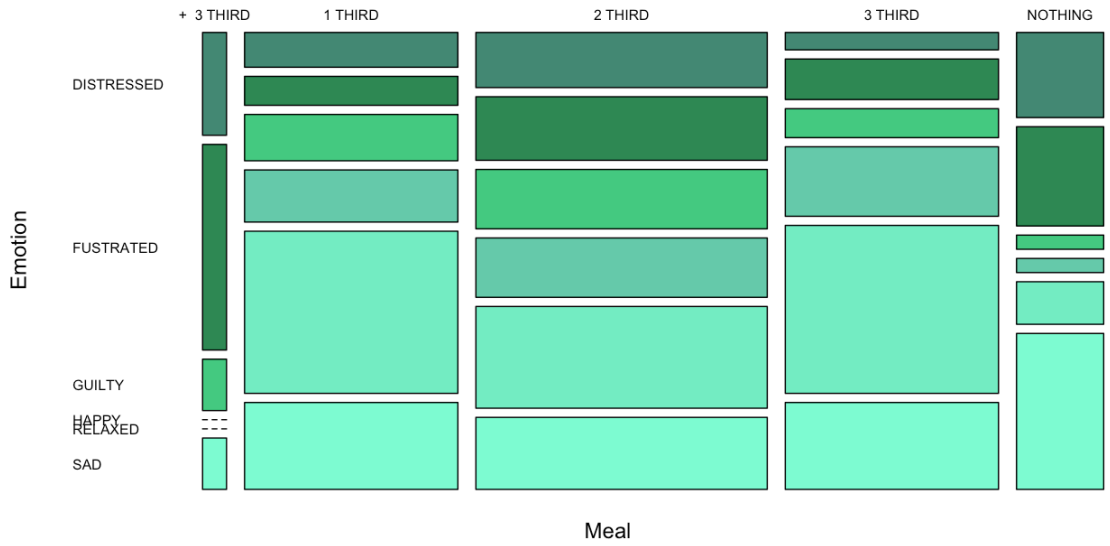
Meal and activity