



Team: MESIO



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# DATASET

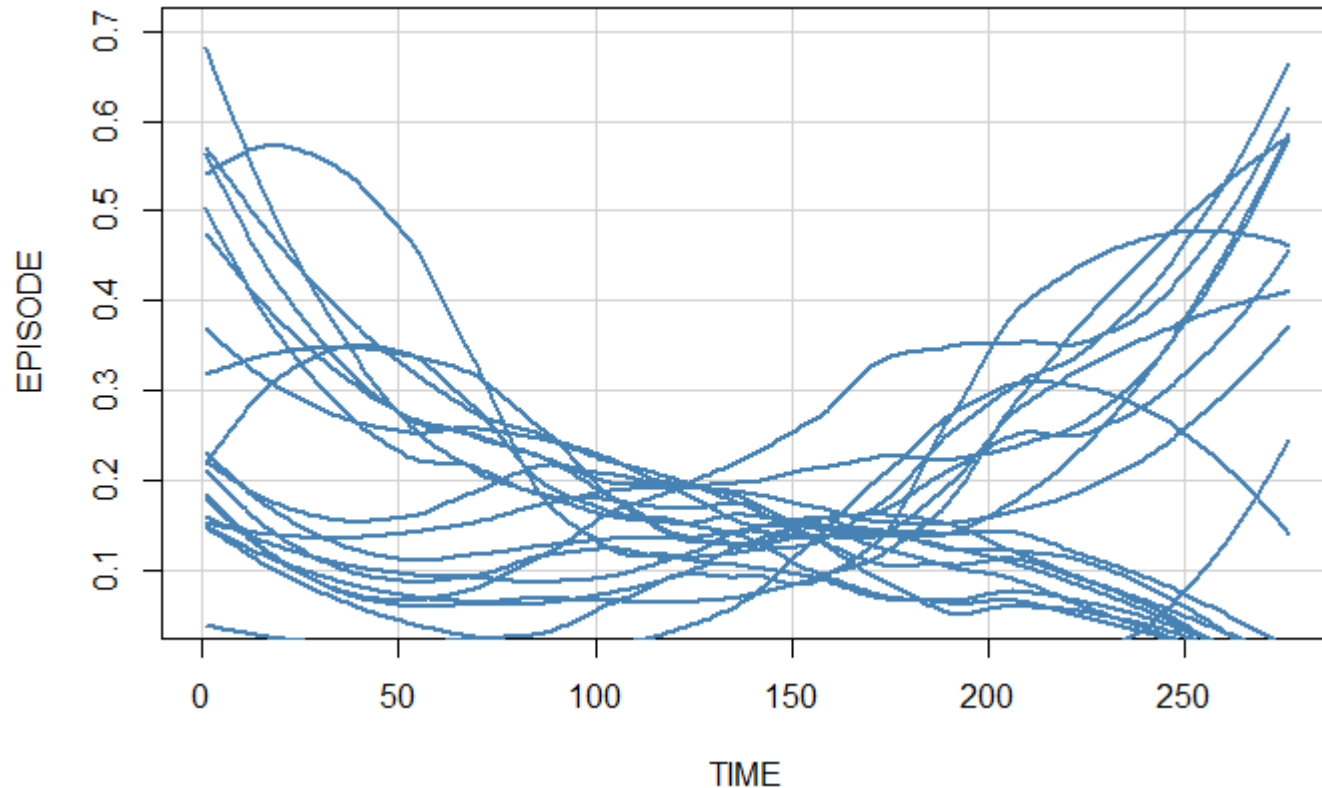
- Data taken from HealthApp.
- 30 patients with eating disorders.
- Data taken during 3 months, three times a day.
- Variables:
  - **EPIISODES**: Episodes registered that time period.
  - **EMOTION**: Mood of the patient at that time period.
  - **MEAL**: Amount of food eaten that time period.
  - **ACTIVITY**: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

# Goals

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

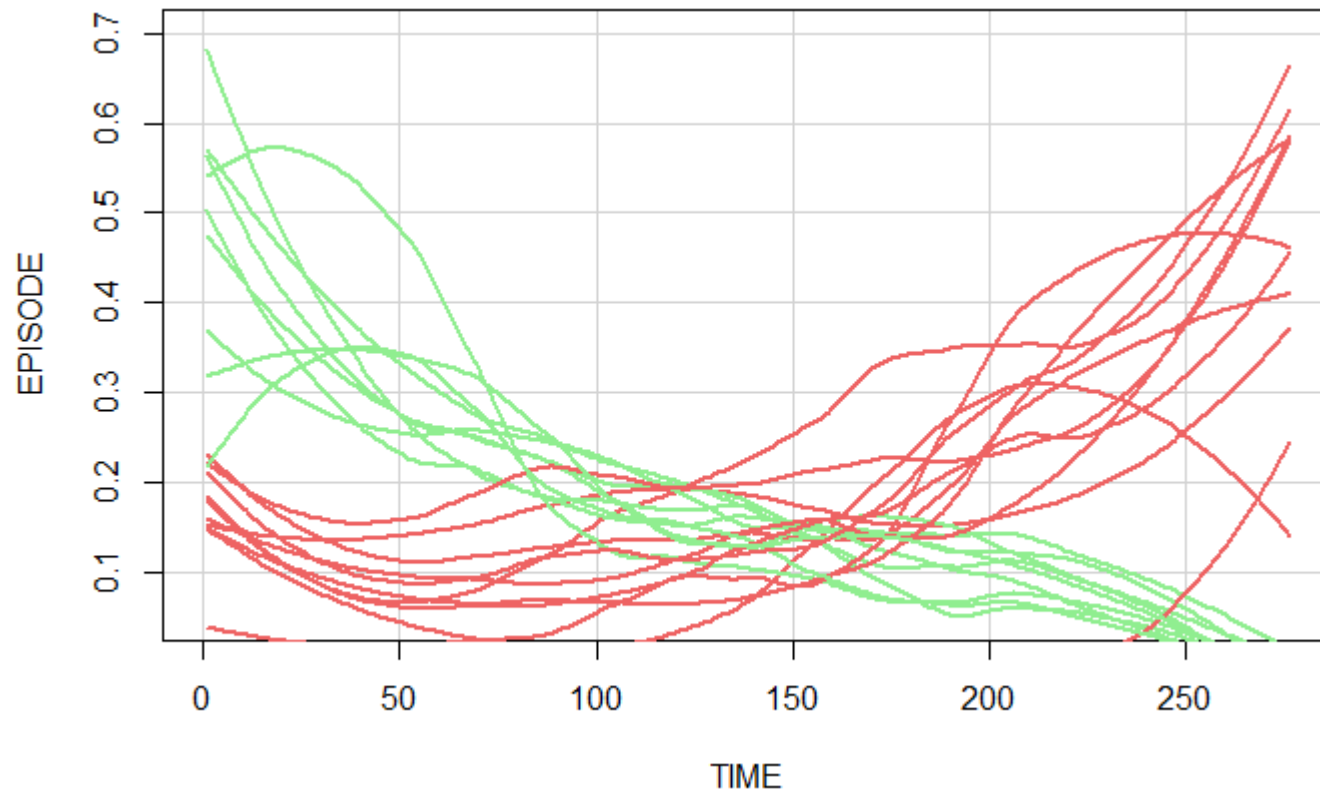
# EXPLORATORY DATA ANALYSIS

Episodes of the patients during time



# EXPLORATORY DATA ANALYSIS

Classification of the trends of the patients



# PREDICTION

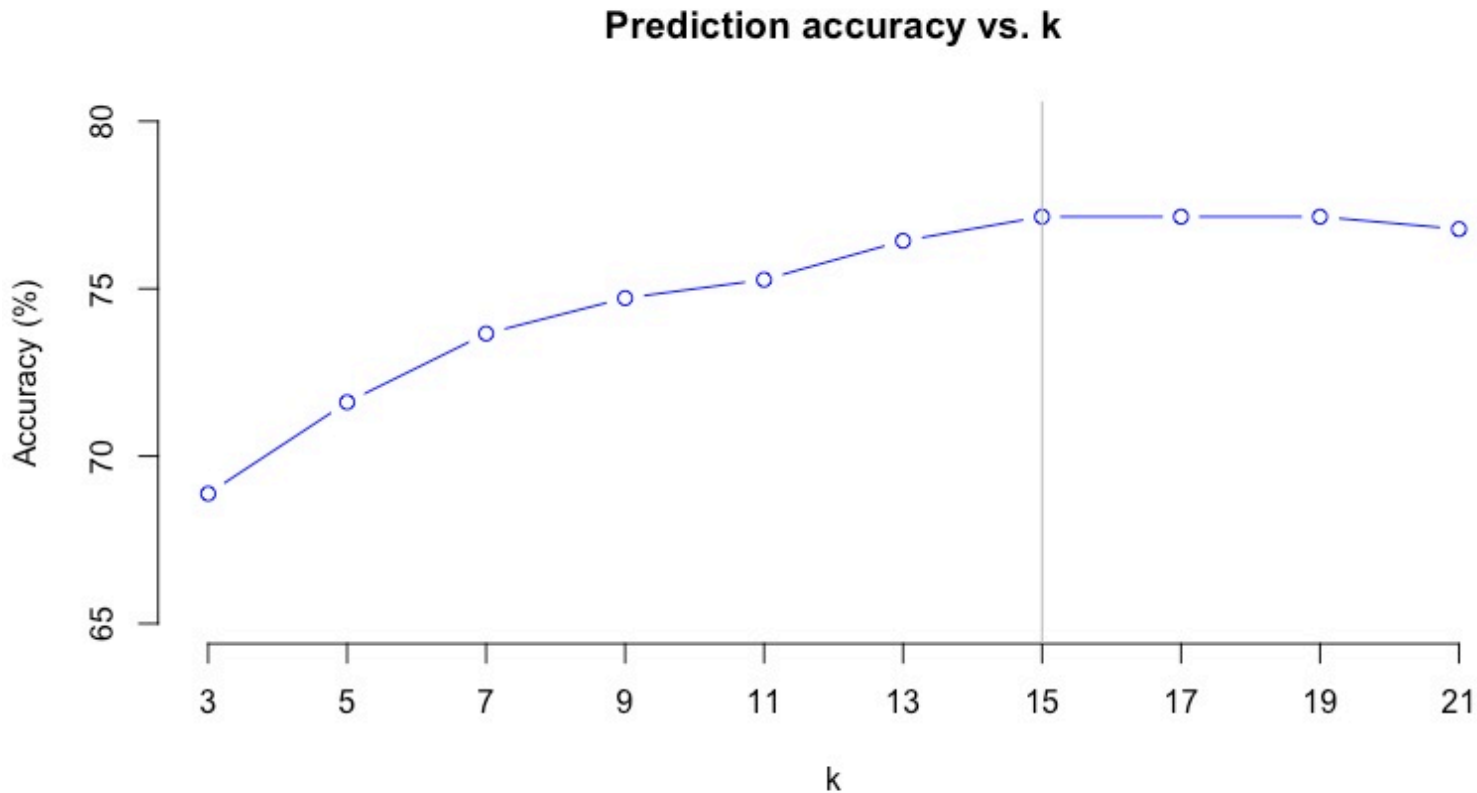


# PREDICTION

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 variables**:
  - 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

