

StartVaardig

Team Motoric



Motoric Skills Development

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Gross Motoric Skills



Gross Motoric Skills



StartVaardig

- Started in 2019
- Providing tools
- Value of motoric skills

Measurements & Tests

- Competence
- Motivation
- Perception
- Questionnaires
- BMI



Research question

„ How can data science be used to predict whether a child has a chance of developing a lack in motor skills a year later? “





Data Preparation & Feature Selection

Data Preparation

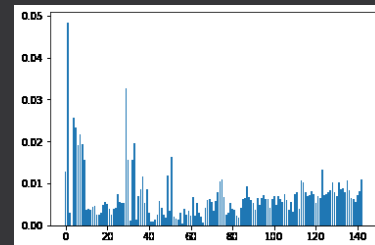


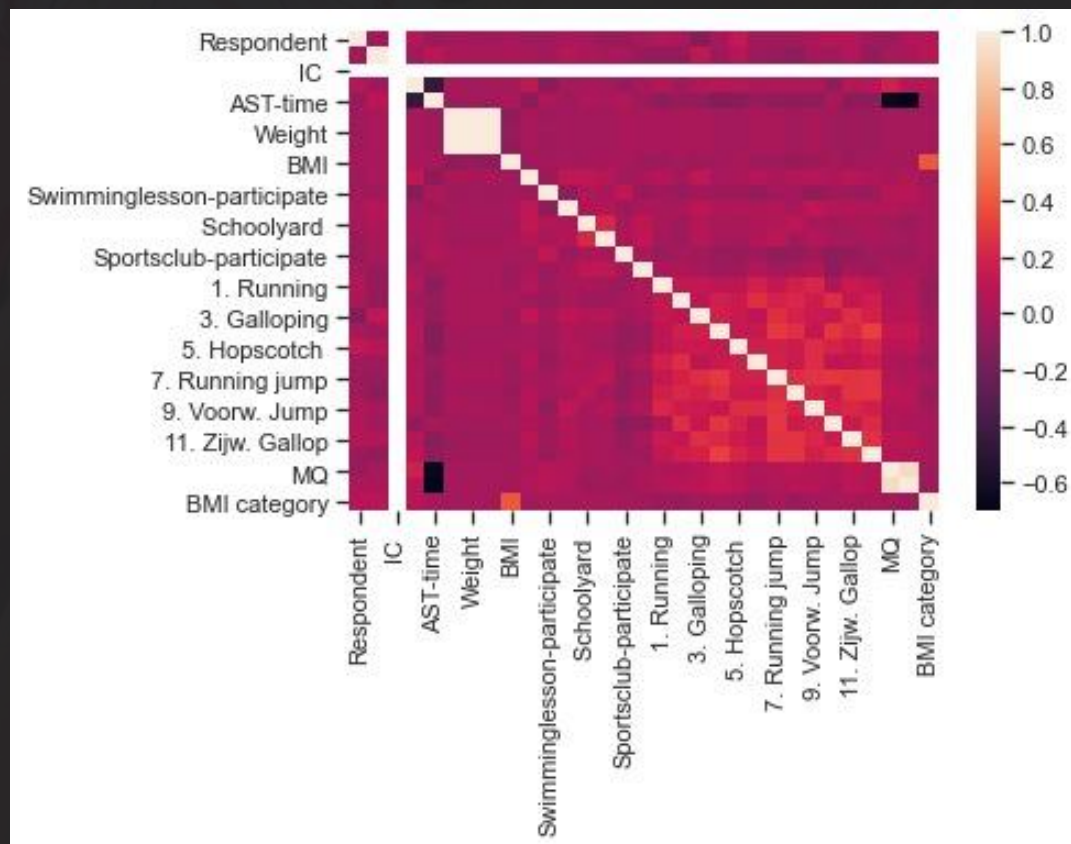
- Basics
- Outliers
- Imputation
- Splitting



Feature Selection

- RandomForest
- Heatmap





Models



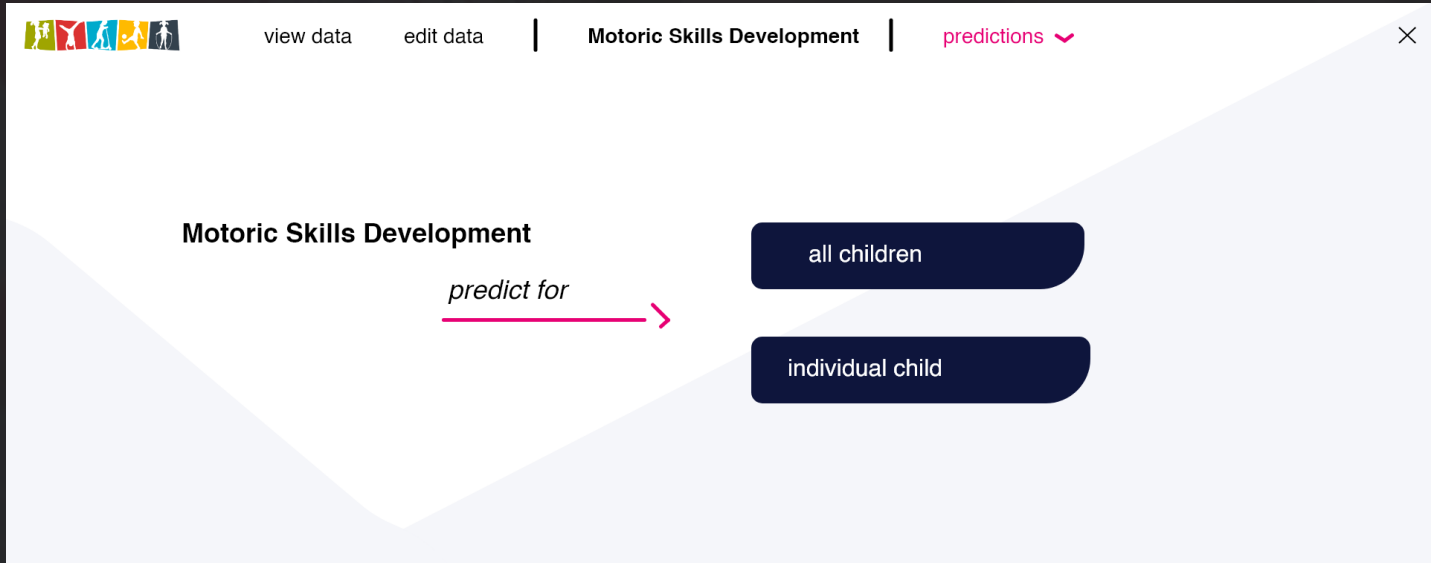
- KNN
- RandomForest
- Decision Tree
- Gradient Boosting Classifier
- Bagging Classifier

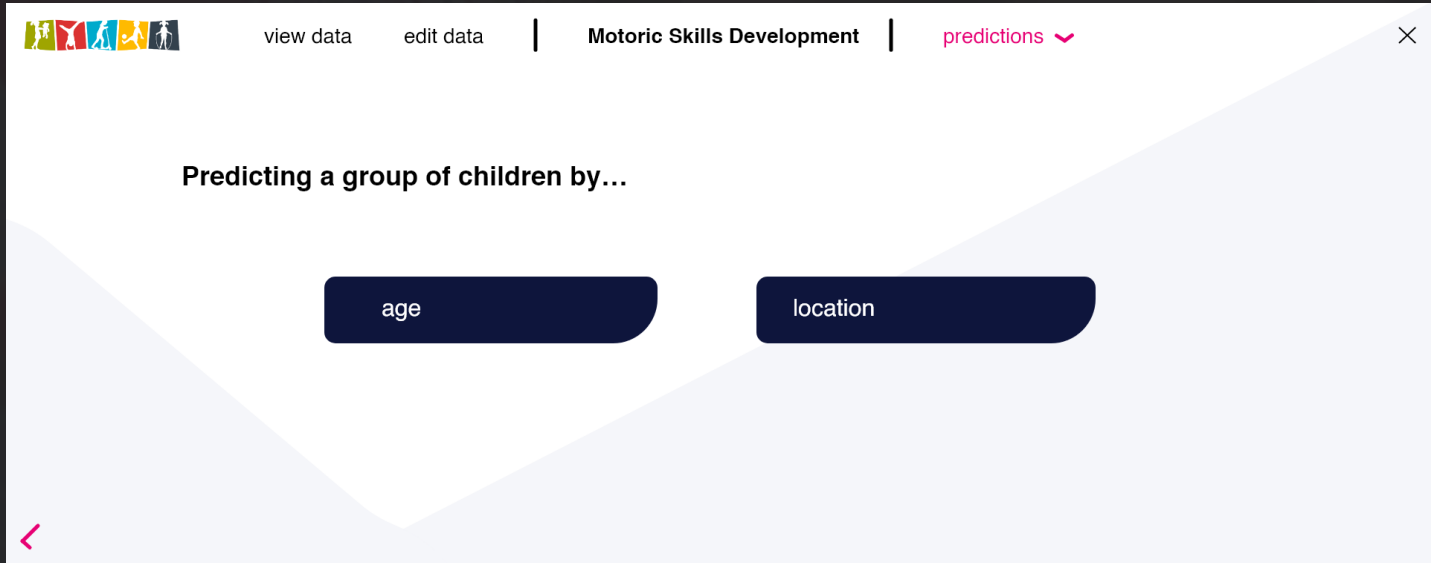


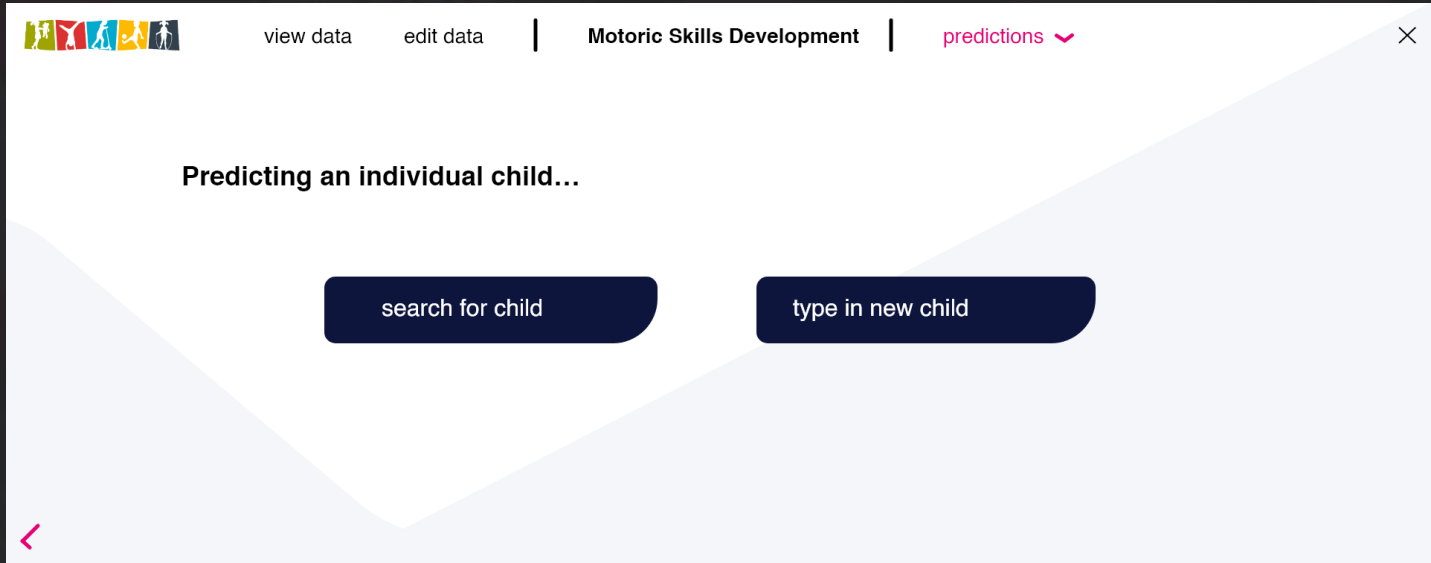
Evaluation

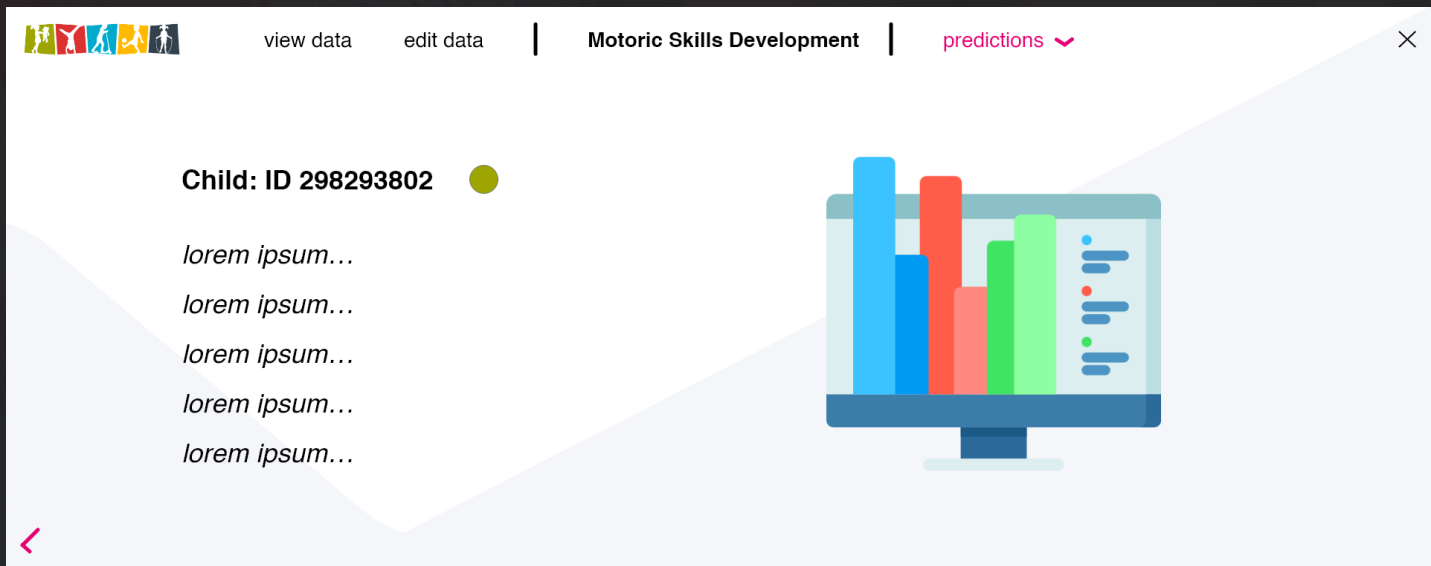
- Confusion Matrix
- False Negative Rate
- Precision-recall Curve

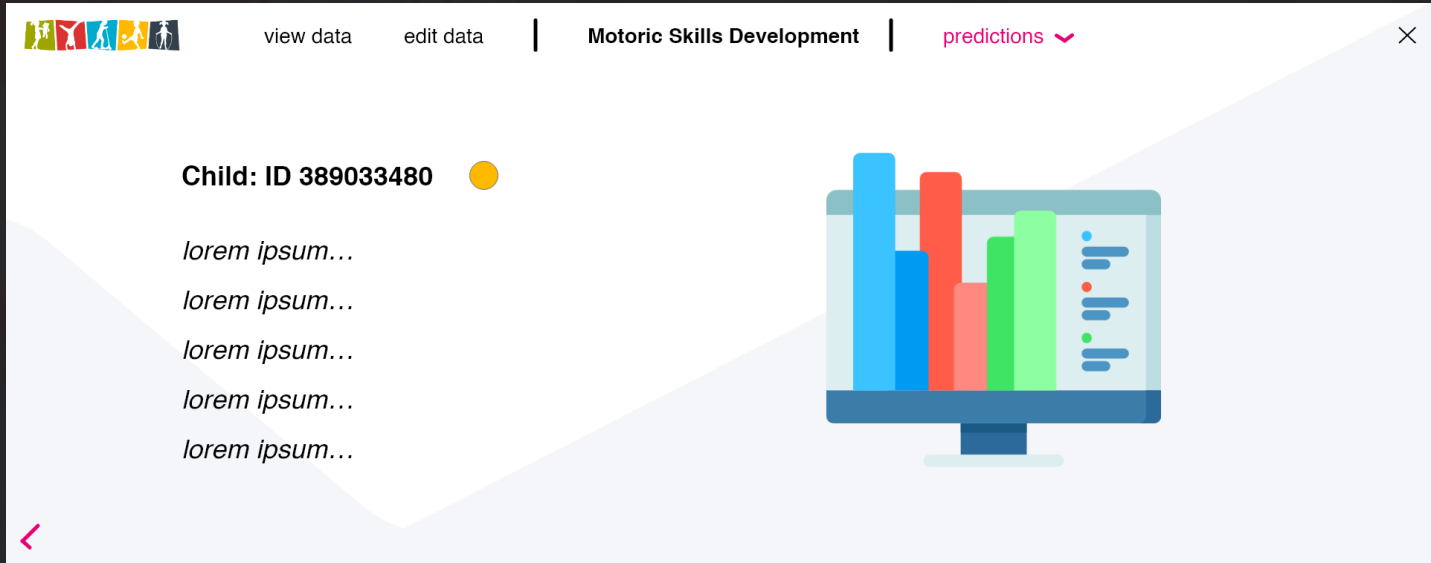
MODEL	FN RATE
Random forest	0.21
KNN	0.18
Decision Tree	0.19
Gradient Selecting Classifier	0.24
Bagging Classifier	0.24

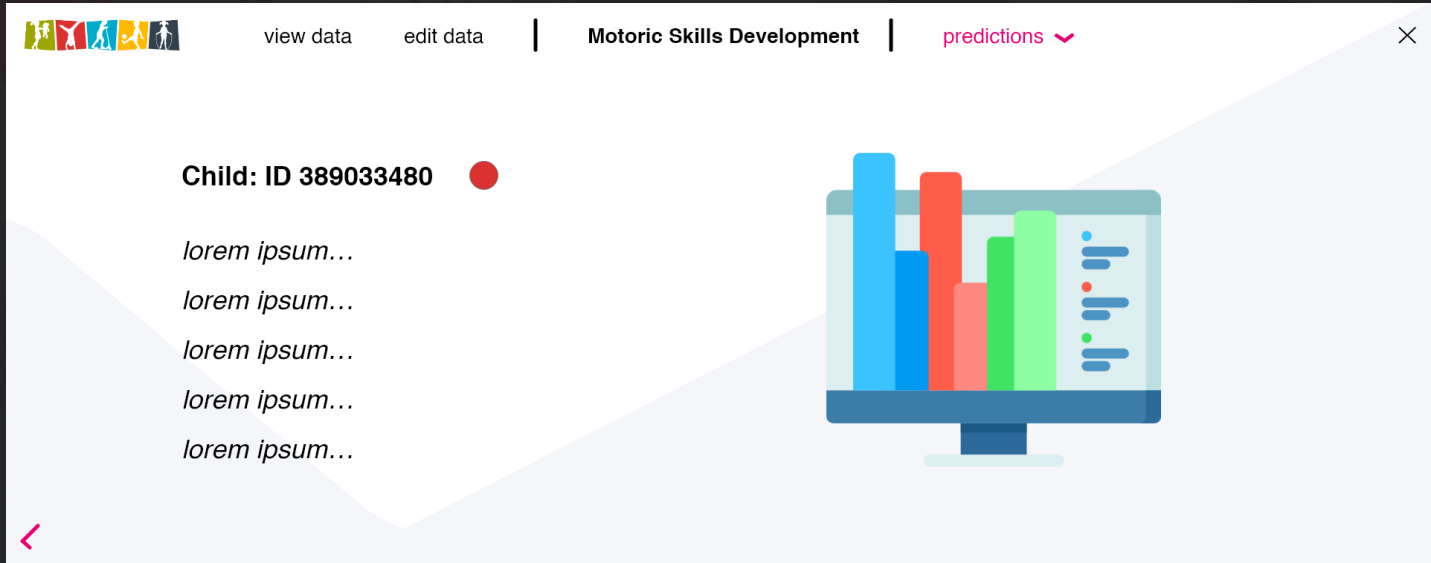










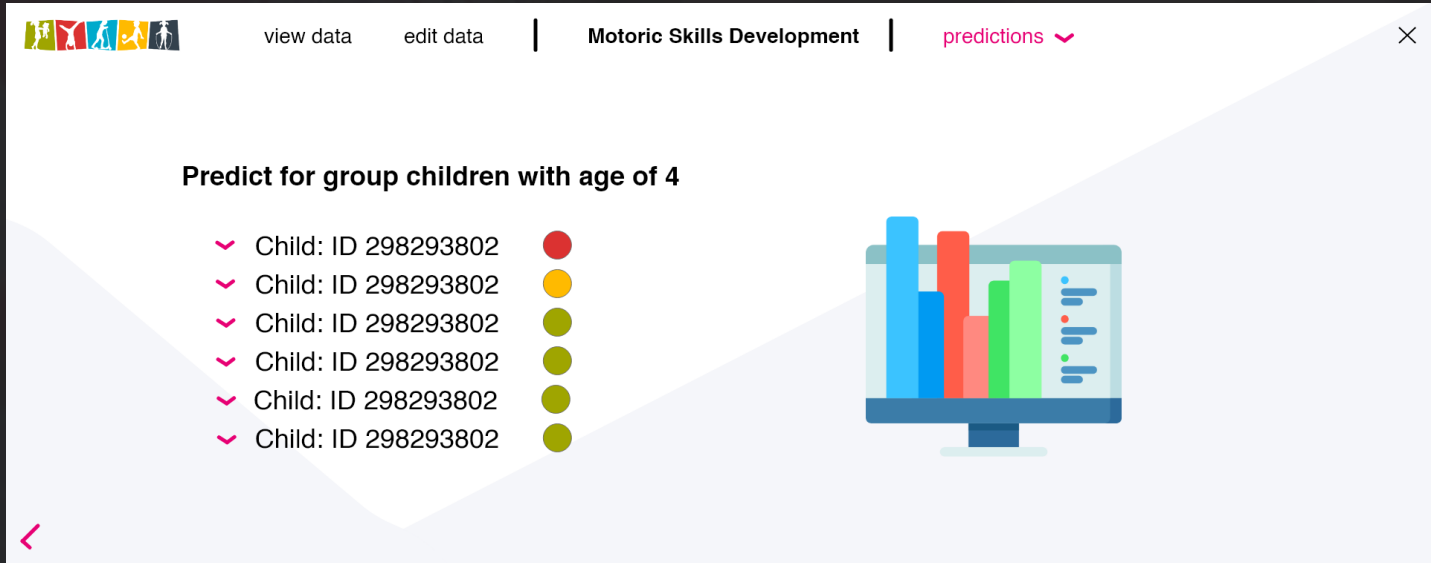


The image shows a user interface prototype for an application titled "Motoric Skills Development". The interface is displayed within a window with a white background and a light gray border. At the top, there is a navigation bar with a logo on the left consisting of five colorful icons (green, red, blue, yellow, and black) representing different motor skills. To the right of the logo are two links: "view data" and "edit data", separated by a vertical line. Further right is the title "Motoric Skills Development", followed by another vertical line and a link "predictions" with a downward arrow. A close button (X) is located in the top right corner. The main content area has a light gray background with a white rectangular box in the center. Inside this box, the text "Predict for group children with age of" is followed by a placeholder text "type in information...". Below this text is a rounded rectangular input field with the placeholder text "Age". A pink arrow points to the bottom left corner of the window.

view data edit data | Motoric Skills Development | predictions ▾

Predict for group children with age of
type in information...

Age



A photograph of three young girls in a starting crouch on a track. The girl in the foreground is wearing a red and white striped shirt and red shorts, looking towards the camera. The other two girls are behind her, also in crouches. The image has a dark overlay with geometric shapes and text.

thank you



Questions