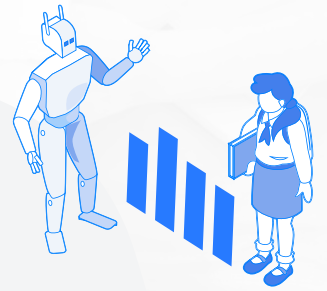# Skolanalys

Smart analyser with

AI for efficient and strategic school operations

Preschool

Primary school

High school

Introduction

Artificial intelligence (AI) is revolutionizing and enhancing the operations of various sectors, including healthcare, banking, energy supply, retail, and other industries.

However, there is a particular industry that offers significant potential for the application of AI technology, namely the *school* and *education sector*. The possibilities that the introduction of AI can lead to in school operations are significant.

However, a key challenge in the implementation of AI technology pertains to the vigilant monitoring of data usage. Crucial decisions must be made at various organizational levels concerning data ownership, with a strong commitment to transparency and the rigorous adherence to ethical criteria in data utilization.

Through the utilization of Skolanalys, educational institutions can attain a more nuanced understanding of their outcomes in relation to diverse factors.

The tool empowers politicians, administrators, principals, and educators to enhance their efficacy in interpreting and translating these outcomes into actionable measures, all the while gaining valuable feedback on the progress made thus far.

While we are at the initial stages of AI implementation **Skolanalys** presents a wealth of compelling opportunities to enhance educational operations and learning conditions. AI algorithms are harnessed to enhance resource allocation and establish more optimal learning environments.

Through these measures, we guarantee the effective utilisation of AI for operational enhancement while mitigating any potential adverse consequences.

In **Skolanalys** we guarantee the *ethical, secure* and *transparent* handling of collected and processed data

Overview

What

Skolanalys offers continuous, in-depth analysis of multifaceted data

The tool aids in conducting intricate analyses to identify patterns and relationships within the data.

Supports educational institutions in maintaining a systematic approach to their operations and conducting follow-ups and evaluations.

Support in data-informed decision-making, reducing the need for perception-based analysis.

Assist in the systematic enhancement of quality in administration and school management

Why

Skolanalys is dedicated to increasing the prospects for children and students to attain their full potential.

Improve eligibility for and progression through upper secondary education (high school)

Establish a school based on a scientific foundation and proven experience.

How

3 modules: Preschool, Primary School, High School that can operate independently

AI with machine learning algorithms

Modules

Skolanalys

Preschool

In preschool, the content is focused on tracking children's learning development from the ages of two to five at a group level.

The results are presented at the municipal, area, and unit levels. Background factors and staff data are analyzed together with the children's learning development.
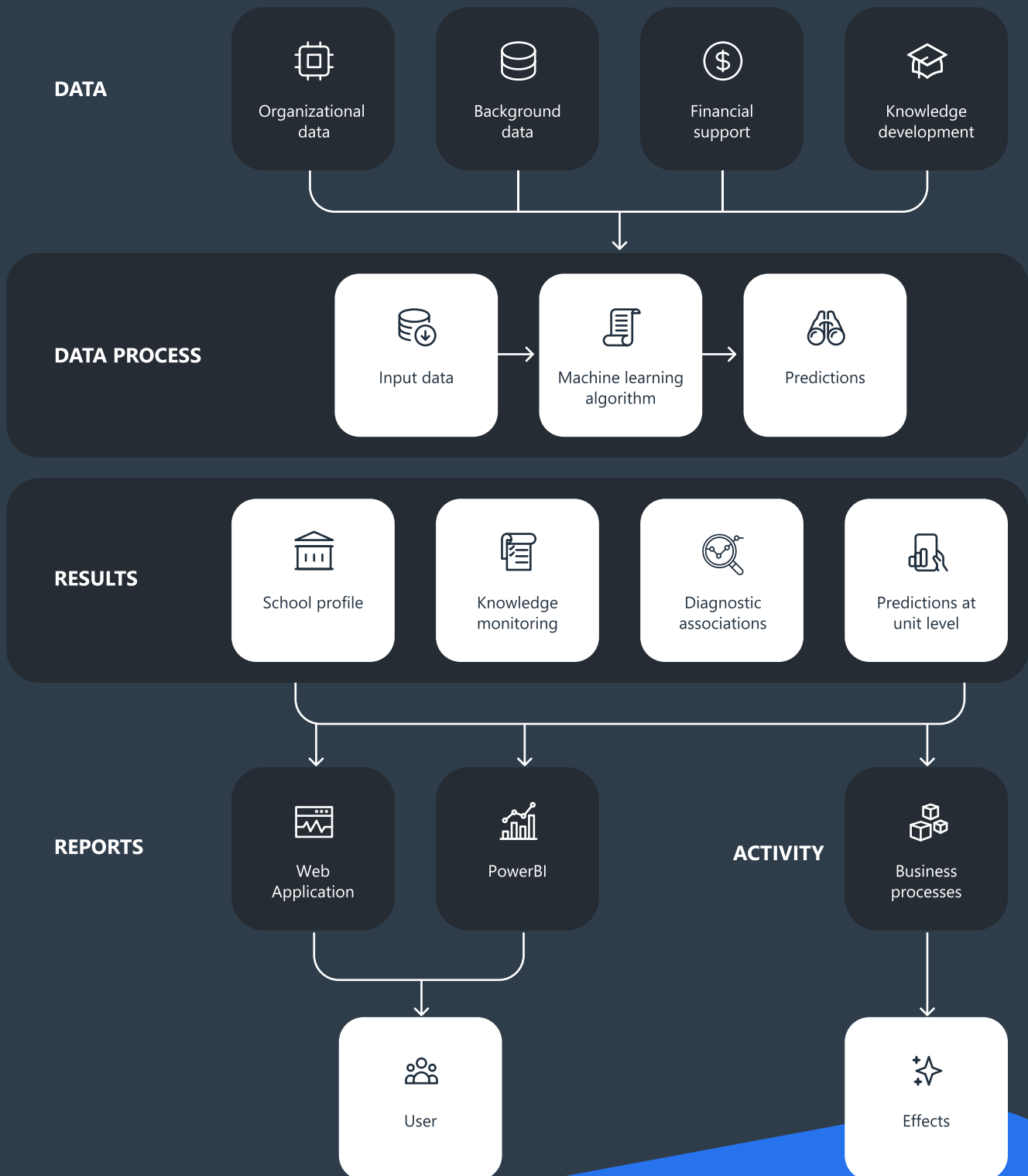
Primary School

In primary school, school and pupil results are analyzed together with school data, socioeconomic background, evaluations, and absenteeism.

High School

The high school module displays program, school, and pupil results in relation to prior knowledge, school factors, socioeconomic background, and evaluations.

Flow diagram

Skolanalys

DATA

Organizational data	Background data	Financial support	Knowledge development

DATA PROCESS

Input data → Machine learning algorithm → Predictions

RESULTS

School profile	Knowledge monitoring	Diagnostic associations	Predictions at unit level

REPORTS

Web Application | PowerBI

ACTIVITY

Business processes

User

Effects

Effects

Tailored Interventions

Efficient Resource Utilization

Increased Opportunities for Children's Success

Enhanced Financial Resource Allocation

Preschool

Overview

Results by year

Segmented Presentation of Children's Knowledge Assessment Results by Learning Criteria, Age, Gender, and Preschool.

Results over time

Visualizing Academic Year Progression through Various Diagrams: Assessing Progress in Criteria, Age, and Preschool Contexts.

Presence

We analyze weekly attendance, considering average hours, alongside data collection results, while also factoring in socio-economic background and evaluations.

Children's group

With the help of AI algorithms, we identify performance-based child clusters. We display each cluster's composition by preschool and area, and within each cluster, we analyze children's ages and their learning criteria outcomes. This enables targeted interventions and support strategies for each cluster.

Connection

We analyze the preschool's data collection results in conjunction with socio-economic background, personnel data, and an employee survey. We then visually represent these findings by illustrating patterns and trends in diagram form.
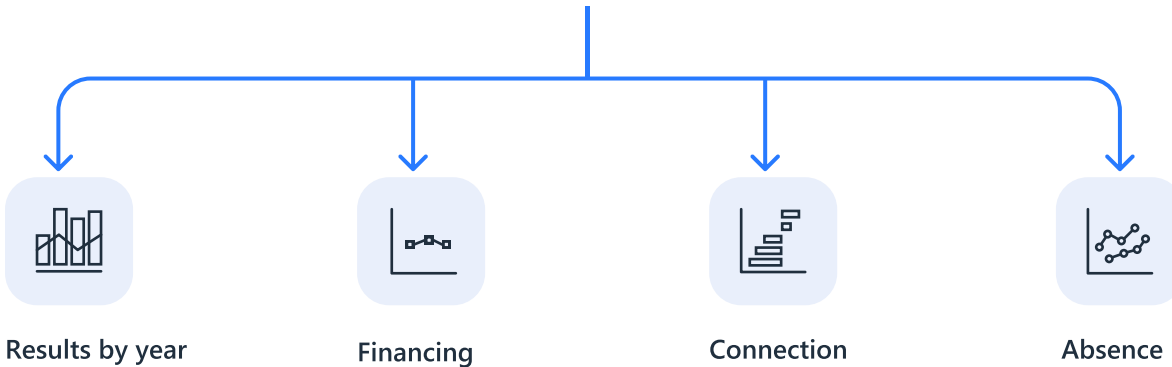
Primary School

Overview

What is the trend in school results over time?

School results and background variables are shown in historical perspective

Results by year

We present the school results in correlation with socio-economic background, student absences, personnel data, and evaluations.

Financing

Analyze the funds allocated for the compensatory mission in relation to the results over time.

Connection

Student and school results, along with socio-economic background, staff, and school data, undergo AI-driven analysis to uncover correlations and patterns. The objective is to determine the predictive value of the factors investigated and assess the strength of these connections?
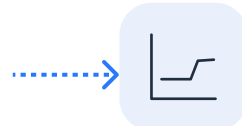
Absence

What is the relationship between student absenteeism and school performance, and how does absence impact grades?
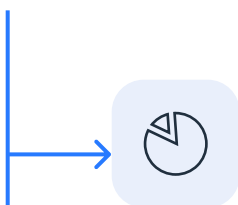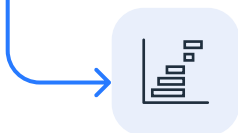
Student

Students are categorized based on their performance in core subjects, along with variables such as absences and teaching experiences.
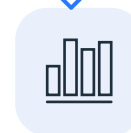
Students in risk group

Using prior results, we make predictions about students who may be at risk of not qualifying. Subsequently, these students are closely monitored and tracked over time.

School

Schools are clustered based on their performance relative to background variables.

Absence analysis

Is there a correlation between student absenteeism and their preschool attendance duration? School results are analyzed against results and attendance in preschool
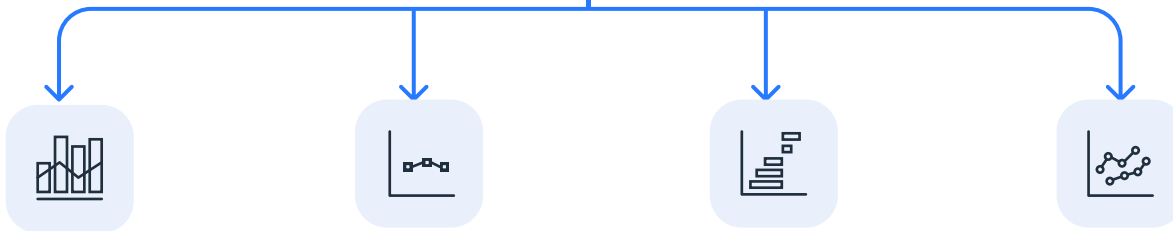
Overview

What is the trend in school results over time?

We present high school diplomas, grade point averages, and background variables for schools and programs within a historical perspective.

Results by year

School results are displayed in relation to socio-economic background, student absenteeism, staff data, evaluations, and grade point averages from elementary school.

Educational cost

Program-specific costs as well as costs for compensatory assignments are analyzed in relation to results in a historical perspective.

Connection

We employ AI to analyze student and school results, along with socio-economic background, staff, and school data, to identify correlations and patterns. Our objective is to assess the predictive value and strength of the relationships among the factors under examination.

Absence

What are the correlations between student absenteeism and school performance, and how does absenteeism affect grades?
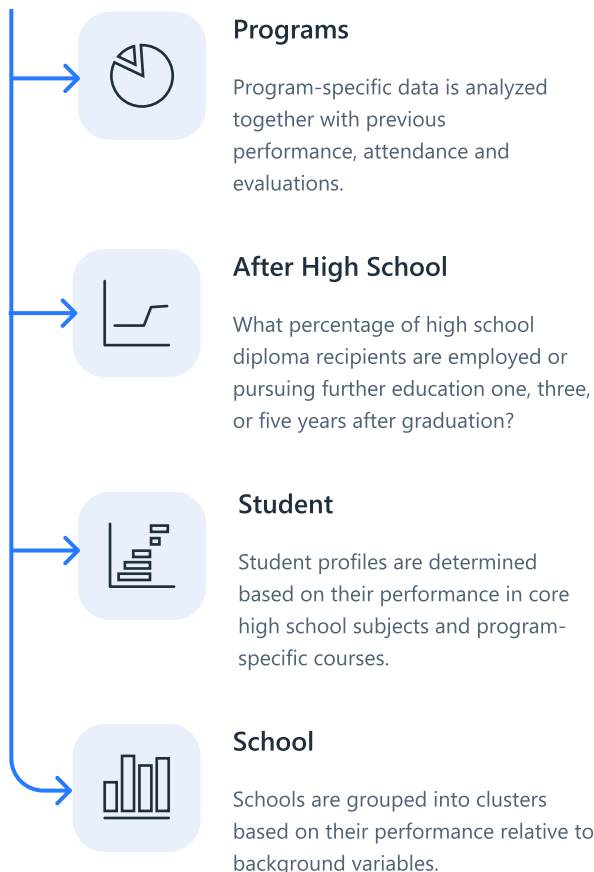
Programs

Program-specific data is analyzed together with previous performance, attendance and evaluations.

After High School

What percentage of high school diploma recipients are employed or pursuing further education one, three, or five years after graduation?

Student

Student profiles are determined based on their performance in core high school subjects and program-specific courses.

**What are the connections or associations in relation to preschool?**

Are there any correlations between students high school performance and their results in preschool?

Students in risk group

Predictions are generated based on prior results to identify students at risk of not meeting qualification standards. Subsequently, ongoing monitoring is conducted for these students over time.

School

Schools are grouped into clusters based on their performance relative to background variables.

Aspects of Modern Data Analysis

VALUE

PRESCRIPTIVE

PREDICTIVE

DIAGNOSTIC

DESCRIPTIVE

COMPLEXITY
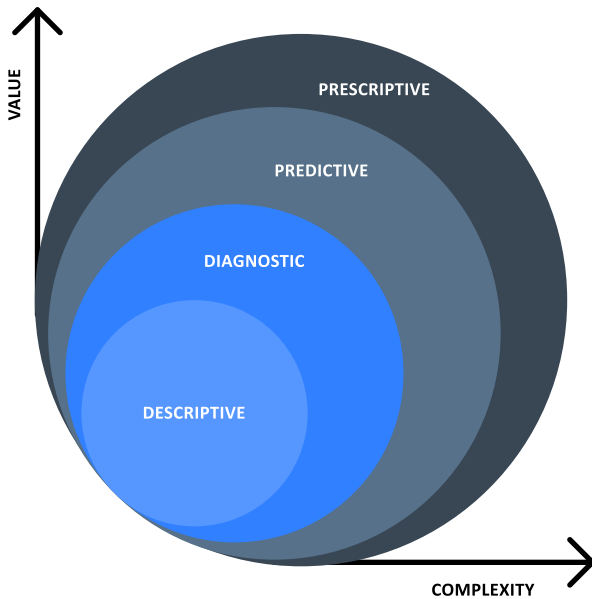
Descriptive

What has happened?
Describes and summarizes data to provide an overview of what has occurred in the school operations. It reveals trends and patterns of school results in relation to conditions such as socio-economic background, school factors, and evaluations.

Diagnostic

Why has it happened?
Shows causal relationships between school results and conditions. Identifies how and to what extent factors such as socioeconomic background, teacher-student ratios, teacher qualifications, and absenteeism have influenced the results.

Predictive

What is likely to happen?
Predicts future outcomes at the school and pupil levels. The diagnostic relationships are used to anticipate how the local context in different schools will impact school results.

Prescriptive

What can be done going forward?
Provides recommendations and suggestions for actions that can be taken to improve school operations. This may include identifying areas that need strengthening or improvement and proposing strategies and methods to achieve these goals.
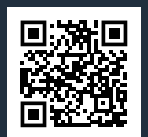
statistics
trends
predictions

Skolanalys empowers educational institutions to gain a deeper understanding of student learning and adjust the school environment and teaching methods to address hindrances.

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