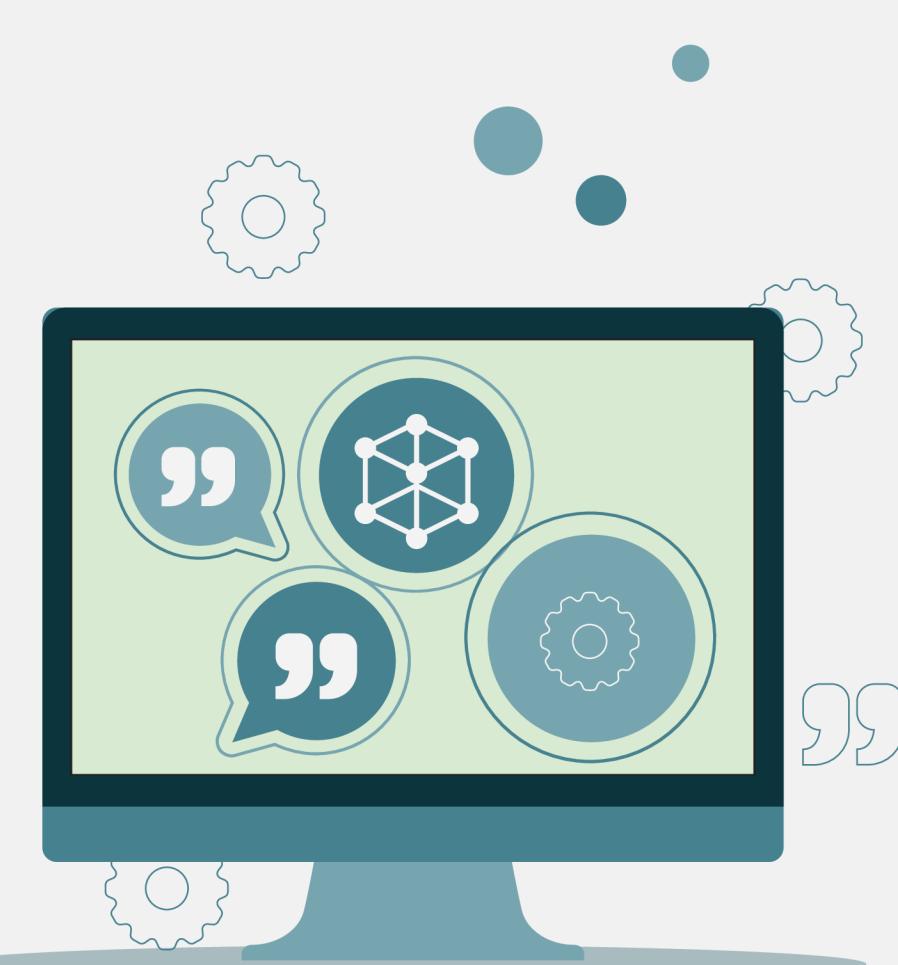


SmarTask



Bigger companies, faster scheduling



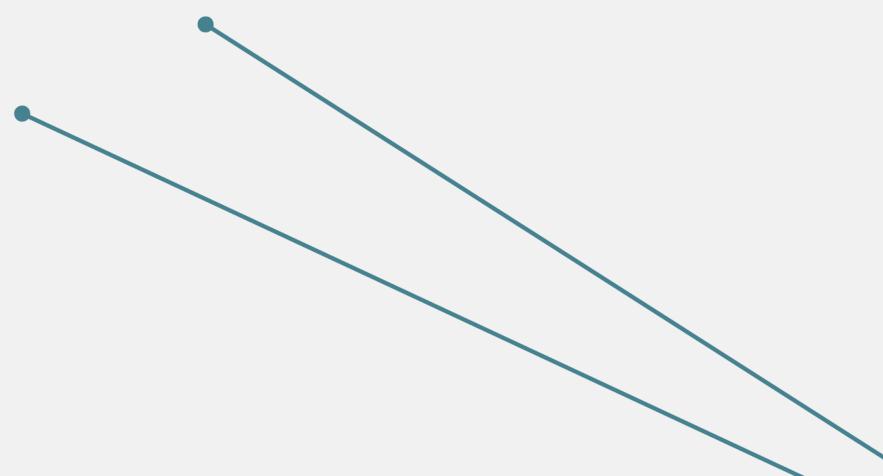
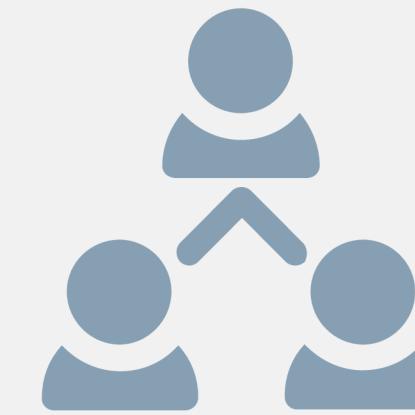
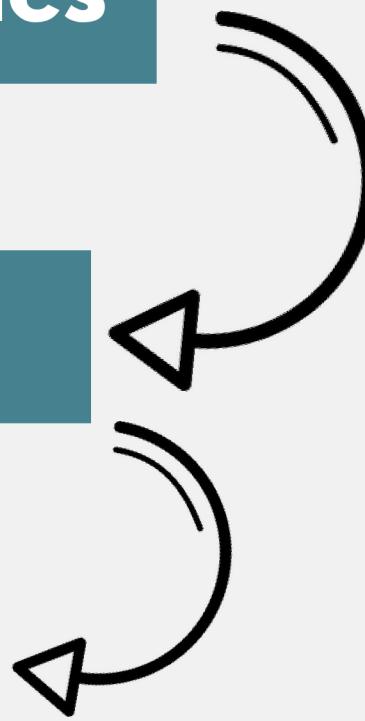
Team

Rafael Kauati
Gabriel Teixeira
João Monteiro
Vitalie Bologa

105925
107876
114547
107854

01 Context

- Manage employees schedules
- Over several workspaces
- Over several months



05 State of Art - related work



Automates compliance and optimizes labor costs

AI requires fine-tuning, and early schedules may be inaccurate

Complex setup and learning curve for managers.



Simple interface with easy-to-use templates for scheduling

AI requires fine-tuning, and early schedules may be inaccurate

Doesn't scale well for complex long-term planning



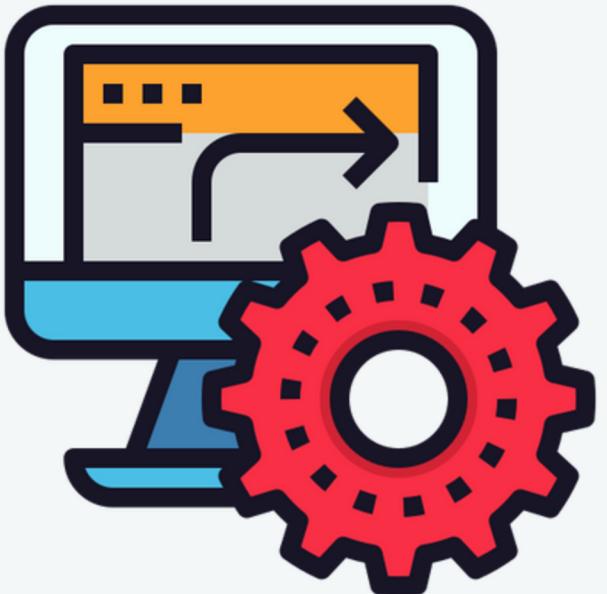
Strong labor law compliance and cost control for restaurants

AI predicts labor needs based on sales and demand patterns

Only suited for restaurants, limiting its flexibility

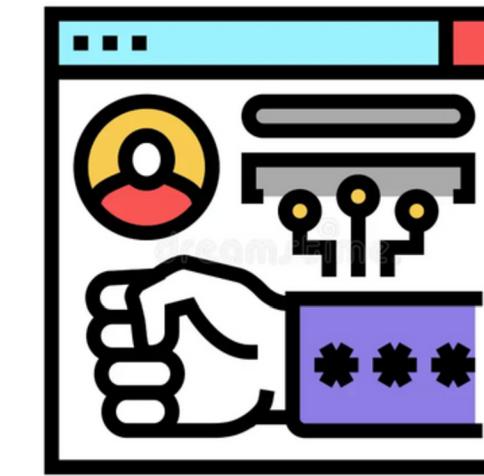
06 State of Art - company's current solution

30%

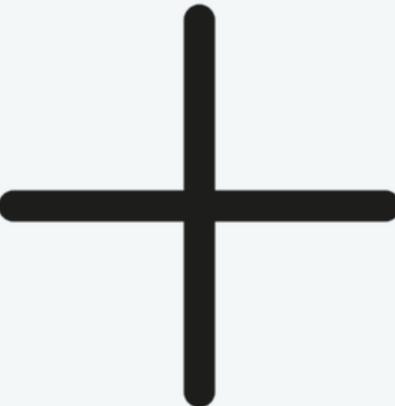


Partially automated

70%



Brute force

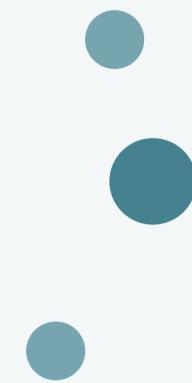
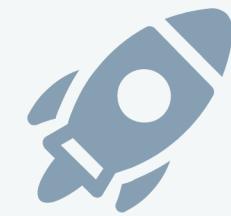
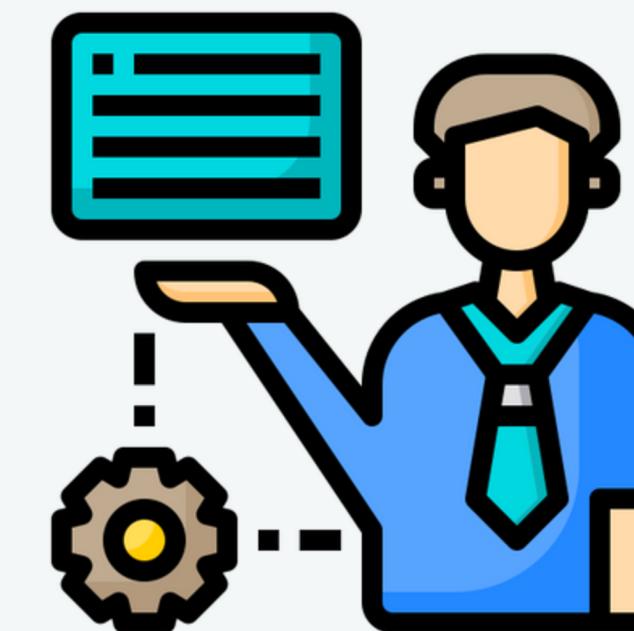


02 Requirement gathering

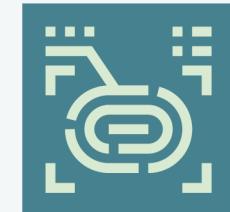


Company meeting

Discussion with the
advisors



03 Functional requirements



Generate a new
schedule



Optimize generated
schedules



Fetch all schedules



Company restrictions
management



Real-time update of
schedules generation
process



Comparison between
multiple schedules

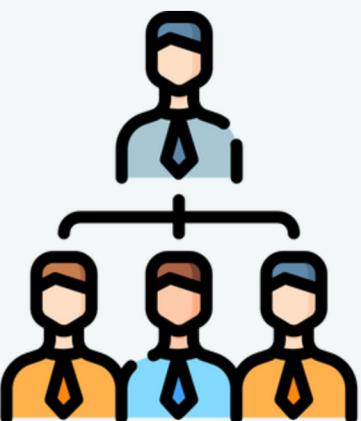


07 Actors

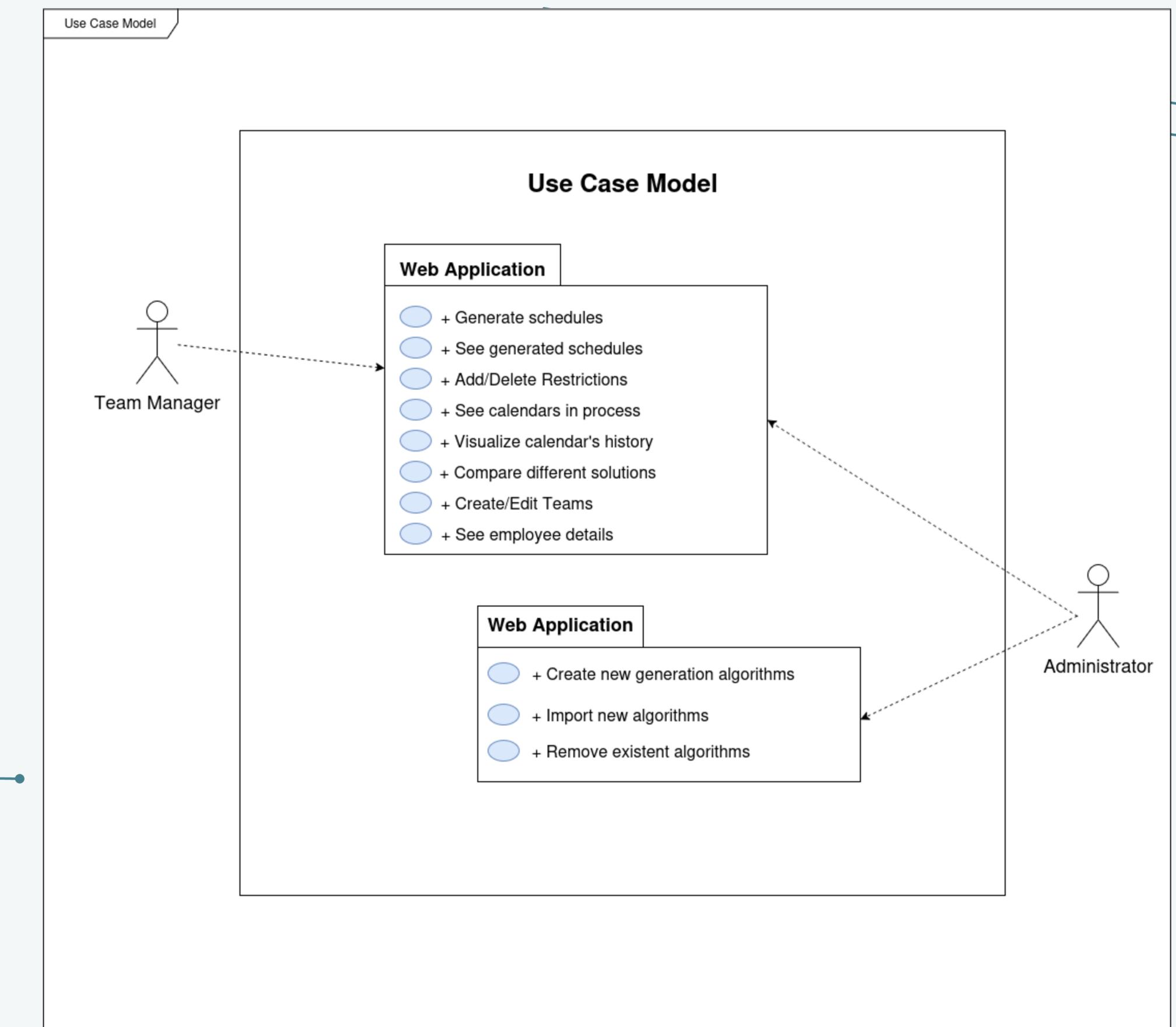


Administrators

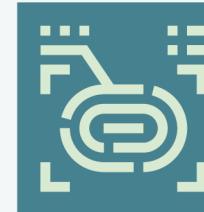
Team Managers



08 Use cases



09 Non-functional requirements



**Performance and scalability
in schedule generation**



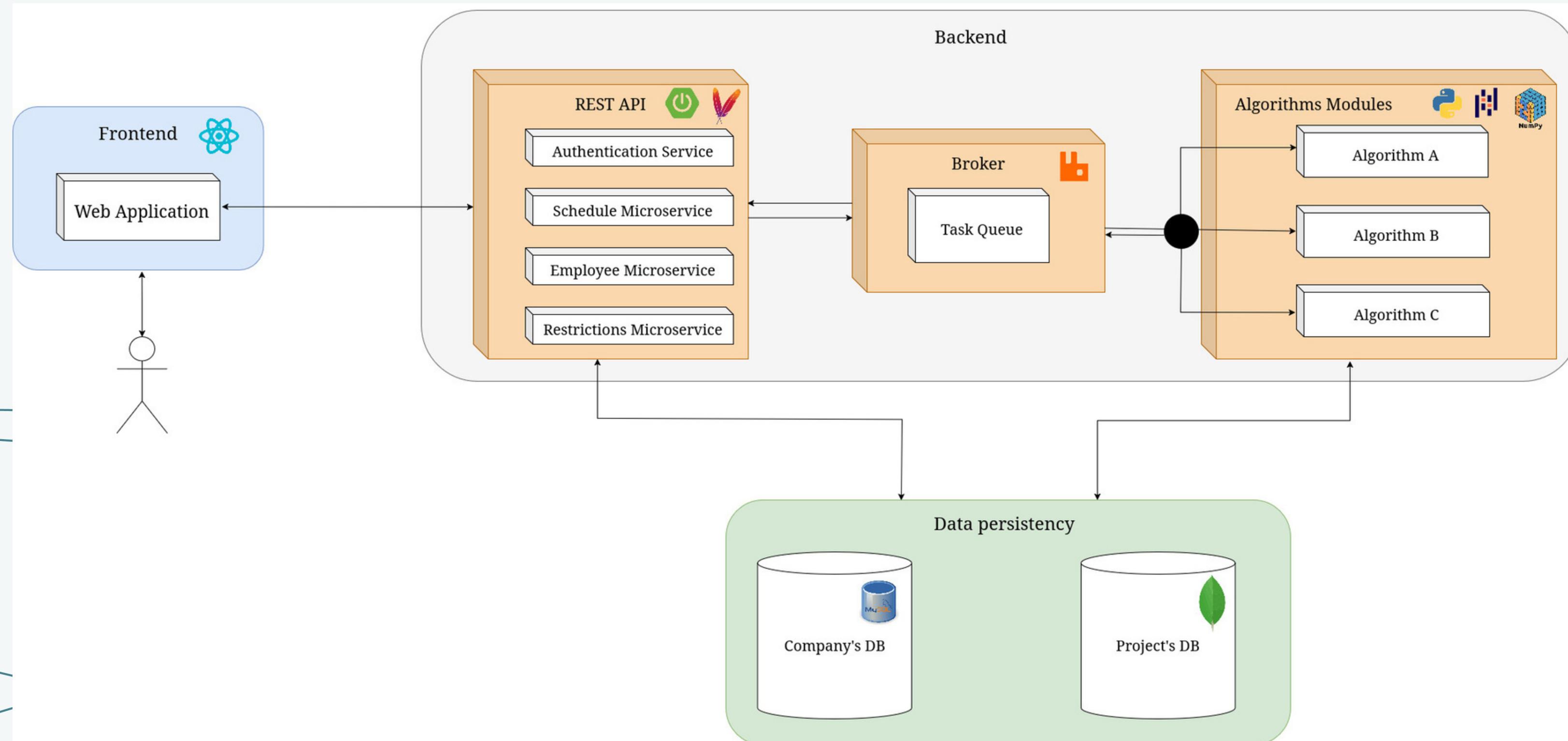
**Availability & reliability over
the schedule generation
process**



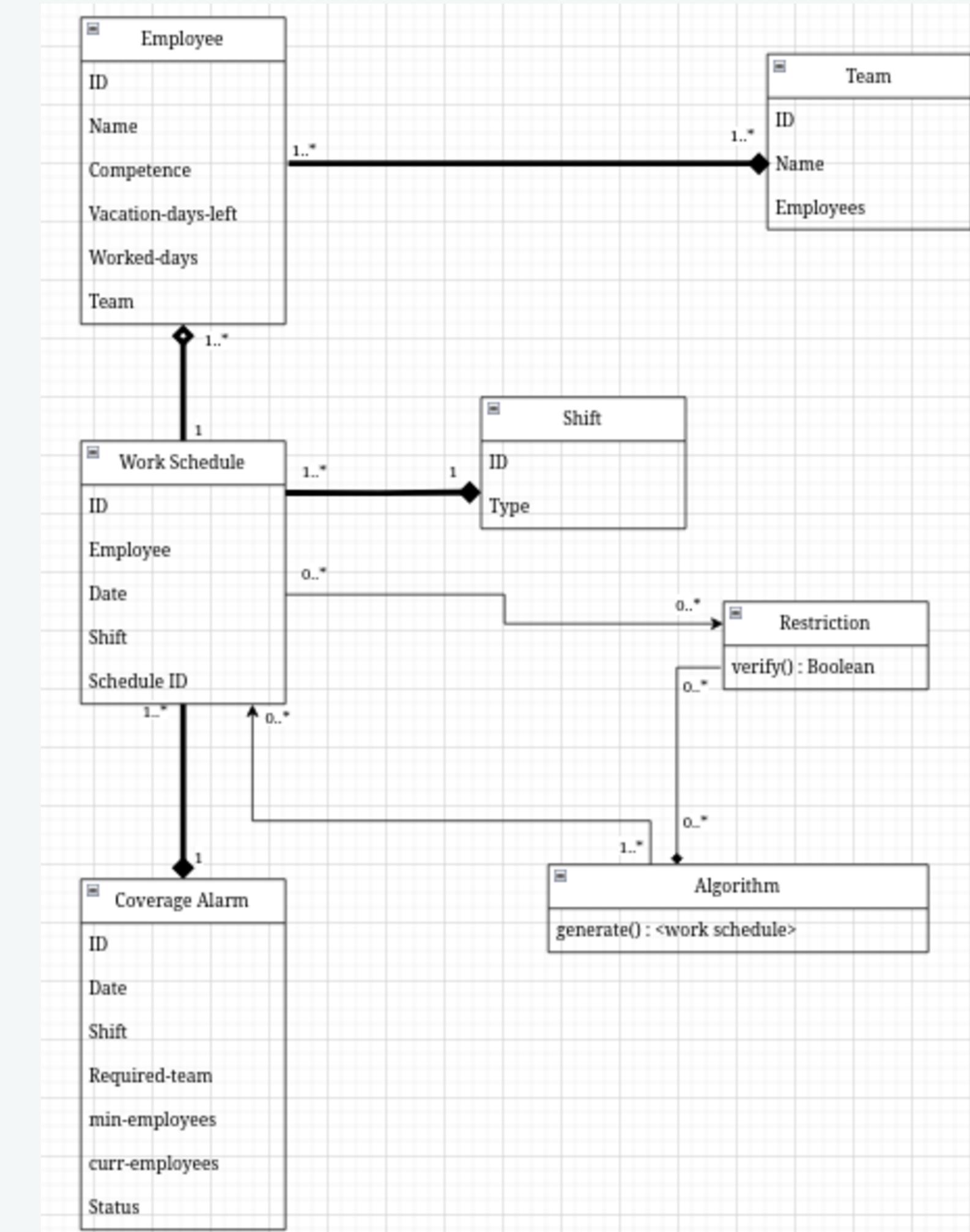
System monitoring and metrics collection



11 Architecture



12 Domain model



13 Mockups

SmarTask

- Home
- Calendar
- Teams
- Employers

Calendar Manager

Employee

All Customers

Active Members

Customer Name	Restriction	Date	Team	Edit
Employeeer 1	Turno da Tarde	13/04	A	(Edit)
Employeeer 1	Férias	16/09	B	(Edit)
Employeeer 2	Férias	19/1 2	B	(Edit)
Employeeer 3	Turno da Tarde	19/2	A	(Edit)
Employeeer 4	Turno da Tarde	01/12	A	(Edit)
Employeeer 5	Baixa médica	20/01	A	(Edit)
Employeeer 6	Folga	03/08	A	(Edit)
Employeeer 7	Folga	08/12	B	(Edit)

Search Short by: Newest

1 2 3 4 40 x

Teams

New teams

Filter

2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

Calendar Manager

Schedule D

Creation Time: 60 mint Requirements: 95% Ideal: Yes

Schedule D

Creation Time: 30 mint Requirements: 100% Ideal: No

2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

Calendar Manager

13 Mockups

The SmarTask application interface displays the following sections:

- Left Sidebar:** Home, Calendar, Teams, Employees.
- Top Bar:** SmarTask logo, Home, Calendar (highlighted), Teams, Employees.
- Calendar Module:**
 - Header:** TURNIS Component dropdown, Heuristic/Metaheuristic, Artificial Intelligence, Algorithm 3.
 - Date Selection:** Date input field (MM / DD / YYYY) with a calendar icon, Duration dropdown (Month selected), Duration min: 1 : 25, Duration max: 2 : 25.
 - Buttons:** Create, Review, Cancel.
- Bottom Buttons:** + Calendar, Manager.

This dialog is part of the SmarTask application's calendar creation feature. It includes:

- Header:** SmarTask logo, Home, Calendar, Teams, Employees.
- Form Fields:** TURNIS Component dropdown, Date input field (MM / DD / YYYY), Duration dropdown (Month selected), Duration min: 1 : 25, Duration max: 2 : 25.
- Buttons:** Create, Review, Cancel.

The SmarTask application interface displays the following sections:

- Left Sidebar:** Home, Calendar, Teams, Employees.
- Top Bar:** SmarTask logo, Home, Calendar (highlighted), Teams, Employees.
- Calendar Dashboard:**
 - Header:** SmarTask logo, Home, Calendar, Teams, Employees.
 - Buttons:** + New Calendar, draft schedule 1, draft schedule 2.
 - Calendars in process:** Test, Algorithm X; Test, Algorithm Y; Test, Algorithm X.
 - Last Seen:** January, Algorithm X; September, Algorithm Z.
- Bottom Buttons:** + Calendar, Manager.

This section shows a detailed calendar view for Store A, with the following components:

- Header:** SmarTask logo, Home, Calendar, Teams, Employees.
- Title:** Store A.
- Table:** A grid showing employee schedules across days of the week (Monday through Sunday). Rows represent employees: Eileen I., Emp. I., John McNeese, Stephen Morris, Richard Morris, Michael Jensen, Melissa Bradley, Monica Morris, Department Team, and David Larson. Columns represent hours from 2 PM to 10 PM.
- Information:** Algoritmo : Artificial Intelligence, Team: A.
- Buttons:** Download, Done.



Bigger companies, faster scheduling



Thanks!



<https://pi-smarttask.github.io/website/>