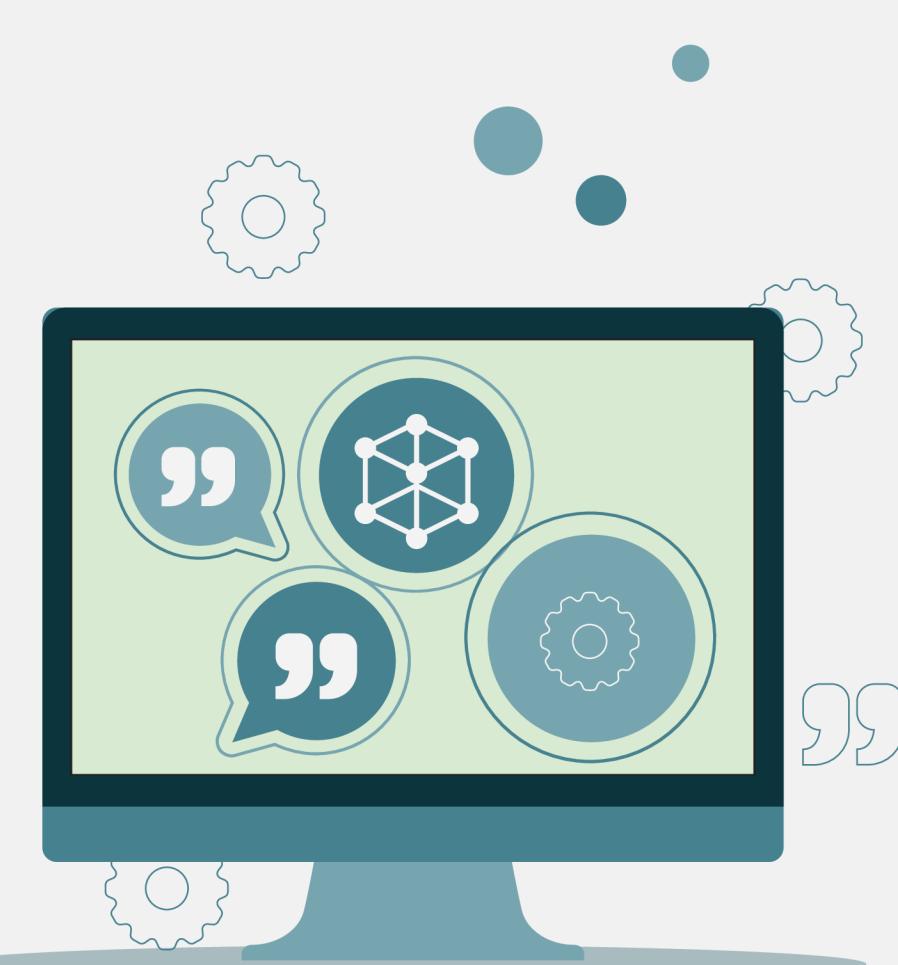


# SmarTask



Bigger companies, faster scheduling



## Team

Rafael Kauati	105925
Gabriel Teixeira	107876
João Monteiro	114547
Vitalie Bologa	107854
André Fernandes	103252

# 01 Project members

Rafael Kauati

- DevOps Master

Gabriel Teixeira

- Team Manager

Vitalie Bologa

- Architect

João Monteiro

- MLOps

André Fernandes

- Product Owner

# Project advisors

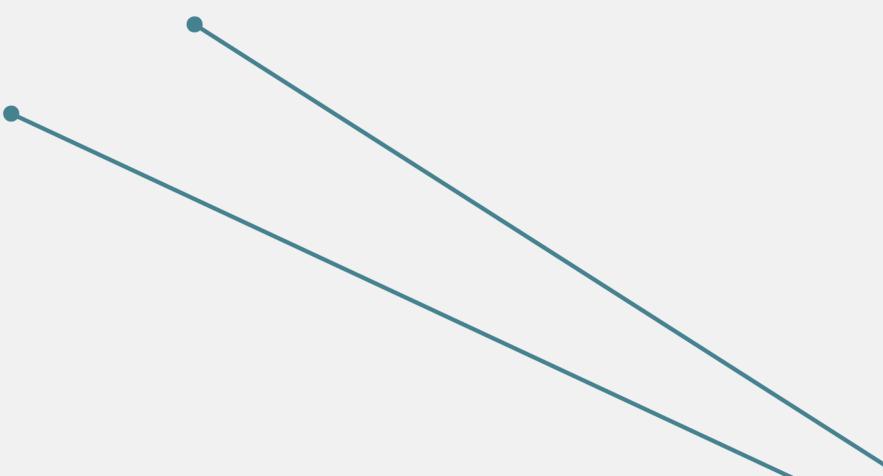
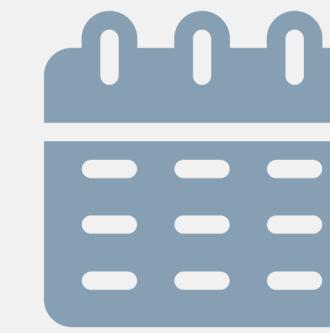
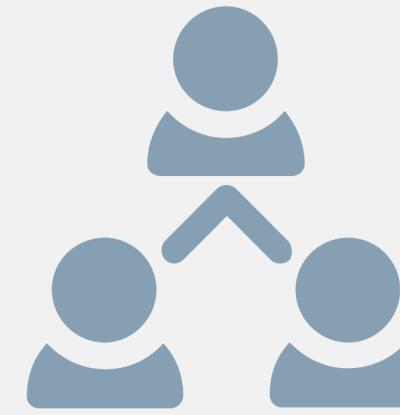
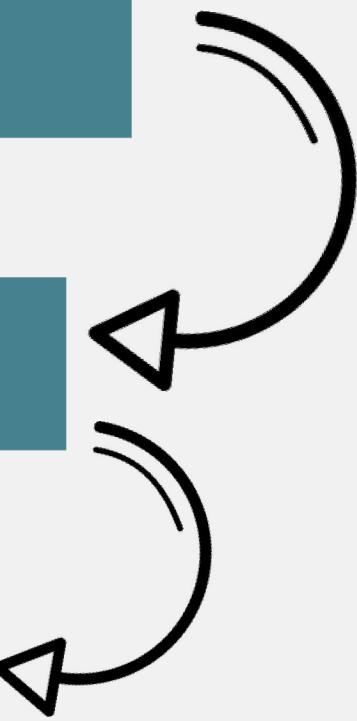
Amaro de Sousa

Luís Seabra Lopes

José Moreira

## 02 Context

- Manage several employees schedules
- Over several workspaces
- Over several weeks

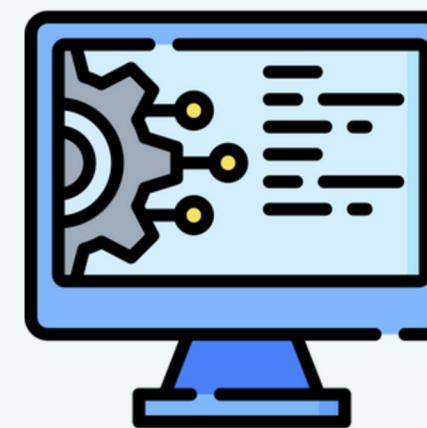


# 03 Major goals and expected results



## Set of algorithms

Which allow using heuristics, meta-heuristics and optimization methods to automatically generate new schedules



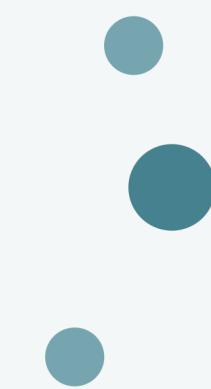
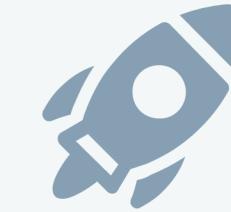
## The system

That allows the generation of the schedule by a named algorithm. Should also support the addition of new methods



## Web app

To display the generated schedule and visual features to help the developer analyze the better option



## 04 Challenges to overcome



Efficiency over Number of company  
employees



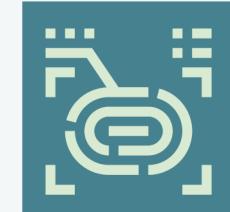
Deal with specific company rules



System extensibility/compatibility



# 05 Task list



## Task 1

Analysis over similar services



## Task 2

Requirement gathering with the company



## Task 3

Architecture planning of the overall system



## Task 4

Web interface development



## Task 5

Development and testing of at least one heuristic algorithm



## Task 6

Development and testing of at least one metaheuristic algorithm



# 06 Task list



## Task 7

Development and testing of at least one optimization algorithm



## Task 10

Evaluate performance of the developed algorithms



## Task 8

Development and testing of the REST API and extensible interface



## Task 9

Integration of the backend with the frontend

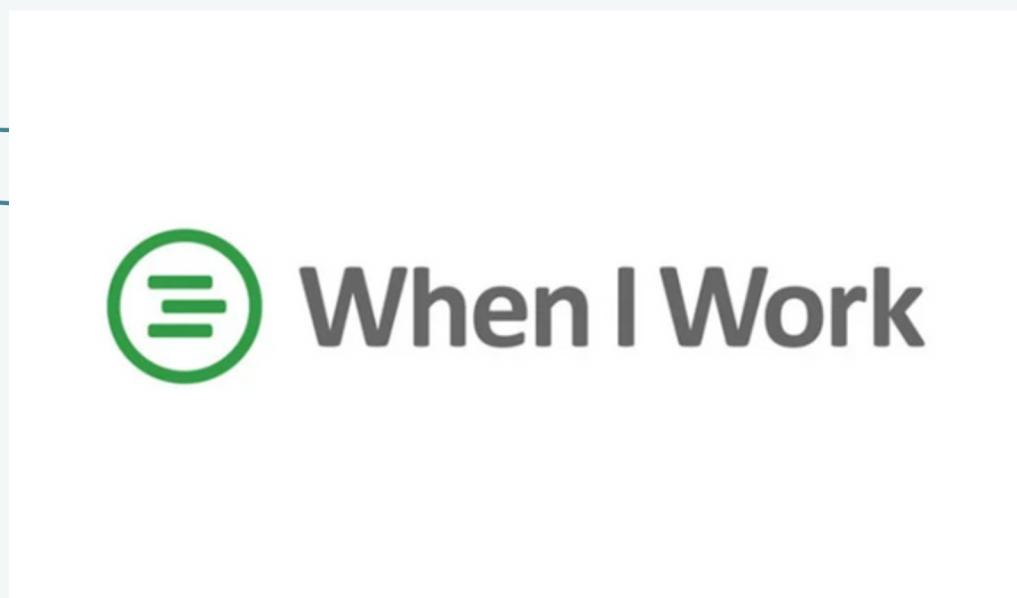


## Task 11

Intuitive documentation for future developers



## 07 Related works



# 08 Calendar

<b>25/02</b> Team formation, project analysis, schedule creation and microsite setup.	<b>25/03</b> Backend connection, API and frontend development, first algorithm implementation and initial bug fixes, start of backend implementation + ext. interface.	<b>06/05</b> Second algorithm finalization, extensible interface improvements, third algorithm implementation, and testing.	<b>03/06</b> Final system completion, performance tests, and preparation of demo, video, and technical report.
<b>11/03</b> Requirements, architecture design, research, user personas, API planning and UI prototyping.	<b>08/04</b> First algorithm evaluation, second algorithm development, and frontend-backend integration, continuation of backend development + ext. interface.	<b>20/05</b> Third algorithm completion, final optimizations, finalization of the ext. interface , system integration, and documentation review.	

# 09 Communication plan





Bigger companies, faster scheduling



Thanks!



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