



The monday.com AI app hackathon

Tuesday, June 20 - Thursday, June 22 2023

Project: Kowalski* Analysis

Find issues in your workflow on monday.com and describe it in natural language

*Kowalski - is one of the most popular surname in Poland and source for memes





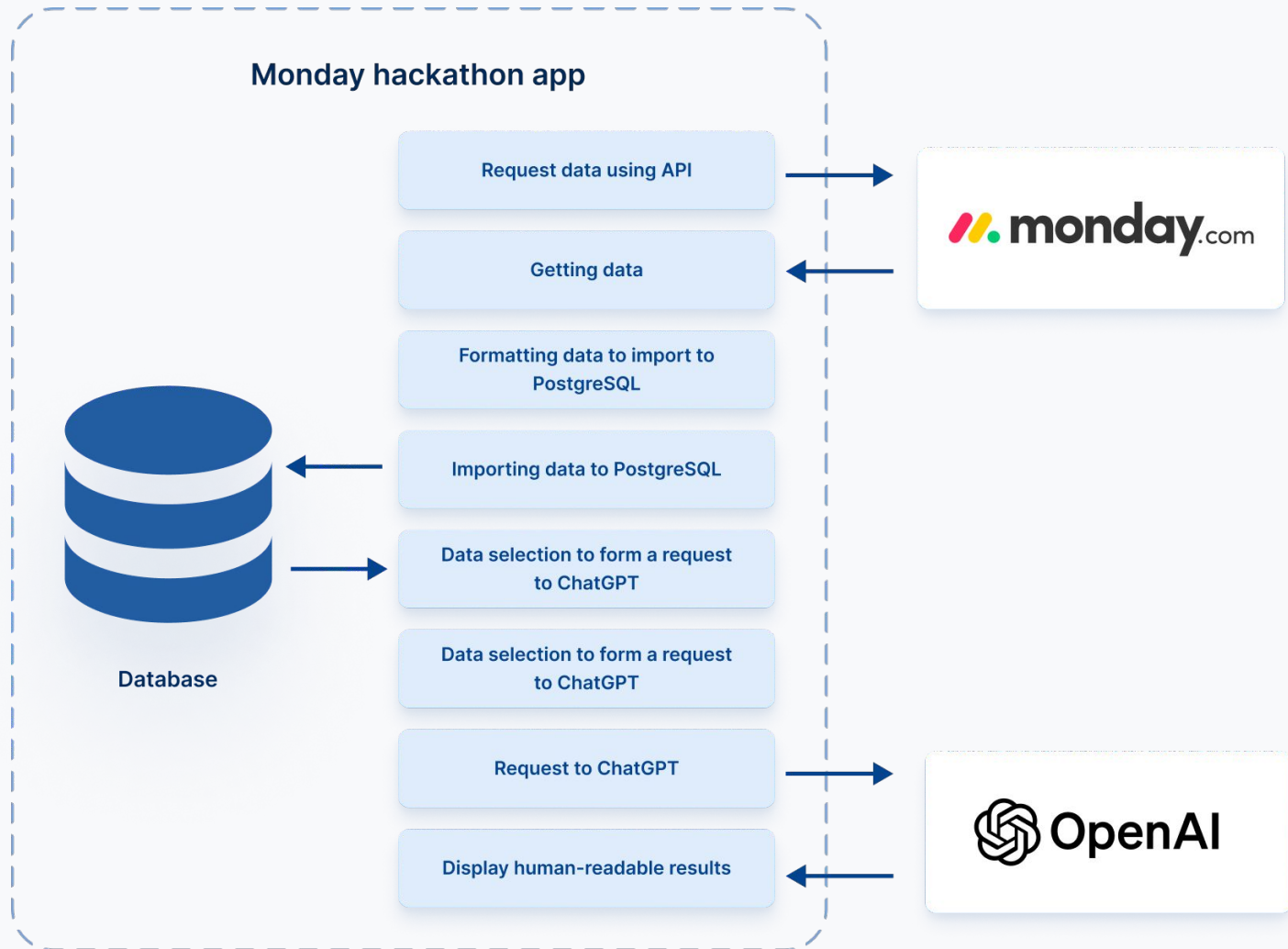
About our project

The objective of our project is to assist users in effectively utilizing project management systems. We aim to identify errors in processes and provide suggestions for resolution. To achieve this, we gather data on tasks and working hours from each employee. By analyzing this data and leveraging Chat GPT, we draw conclusions to inform our recommendations.

These are 5 steps of our process:

1. Getting data from Monday
2. Formatting data to import to PostgreSQL
3. Importing data to PostgreSQL
4. Data selection to form a query to AI
5. Display human-readable results

Project scheme



Database scheme

| users |
|--------------|
| 123 id |
| ABC username |
| ABC email |
| ABC role |
| 🕒 update_dt |

| time_tracking |
|---------------------|
| 123 id |
| 123 task_id |
| 123 board_id |
| 🕒 started_at |
| 🕒 ended_at |
| 123 started_user_id |
| 123 ended_user_id |
| ABC status |
| 🕒 created_at |
| 🕒 updated_at |

| boards |
|----------------|
| 123 id |
| ABC board_name |
| 123 creator |
| 🕒 update_dt |

| tasks |
|---------------|
| 123 id |
| ABC task_name |
| 123 board_id |
| 🕒 create_dt |
| 🕒 update_dt |

Technologies we used

1. Monday.com API
2. Python, FastAPI
3. Database, PostgreSQL
4. AI, chatGPT, openAI API
5. Docker





Cases of use

In Monday app, you can use several time trackers at the same time for one task. Our application allows you to identify problems in the process of work, such as:

1. The employee worked simultaneously on several tasks.
2. The employee turned on several time trackers at the same time in one task.
3. Time tracking for Task was started by one user but ended by another.
4. Some users don't switch off time tracker, then they have many not real work hours.

| Server | Release | Timeline | Monitorowanie cz... | Monitorowanie cz... | Monitorowanie cz... | + |
|--------|---------|-------------|---------------------|---------------------|---------------------|---|
| Dev | | Jun 20 - 23 | ⏸ 25h 48m 59s | ▶ 0m 16s | ▶ 0m 16s | |
| Prod | | Jun 20 - 23 | ▶ | ⏸ 0m 47s | ▶ | |
| | | Jun 20 - 23 | | | | |



Cases of use to improve

Our system allows you to add possible problems for processing in any time. To do this, it is necessary to prepare an appropriate data set and describe what exactly is the problem in it. Then just add code to server to work with openAI.

Example: build a table of total working hours for each day and identify deviations

- What days do people work more/less
- Do people turn off the work timer
- Give advice on how to improve your workflow



Cases of use to improve

If you take more data parameters for analysis, such as task statuses, then you can relate the problems of statuses and working hours. In this case, it will be possible to detect problems:

- The employee was working on a task that was in an inappropriate status (for example, he should have been “In progress”, but worked in “Closed”)
- How often tasks are reopened in the project and how long employees work on the task after reopening.

If you get data on task descriptions and comments, you can analyze the following problems:

- Based on the comments, identify the reasons for reopening tasks
- Identify the longest tasks and analyze the causes by comments



Conclusion


We believe that our application can be useful for project managers to analyze the processes in the organization and improve them.

Knowing how to use working hours in accordance with the rules of the organization will allow you to better plan work on projects and increase the effectiveness of the team.

By utilizing an appropriate dataset and accurately describing the issues at hand, it is possible to leverage the system's capabilities to gain valuable insights.

The system enables the detection of situations where employees fail to turn off the work timer, allowing for improved time tracking and efficiency.

Incorporating additional data parameters such as task statuses or task comments, users can establish correlations between status-related problems and working hours. This approach helps in detecting cases where employees work on tasks in inappropriate statuses or where tasks are frequently reopened, define the reasons of reopening based on task comments, highlight on potential workflow inefficiencies.



By analyzing task descriptions and comments, users can uncover the reasons for task reopening and identify the longest tasks, thereby gaining deeper insights into the underlying causes through comment analysis.

Our system empowers organizations to enhance their workflow, optimize productivity, and make informed decisions for improving their processes.

Our team



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Team name:

TimeMenter

Company name:

Menter

Team leader:

Natallia Miazhennaya

Team members:

Michał Korol, Gabriel Moskwa, Larysa Kuchko

Useful links

Project GitHub: <https://github.com/ctf-org/monday-hackathon>

Test monday account:

<https://natashamezhennaya.monday.com/boards/1214715636>

Mail to contact: natasha.mezhennaya@gmail.com

Feel free to ask us to add you as member to our monday account - to test our app

The screenshot displays the Monday.com work management interface. The top navigation bar includes the Monday logo, the text 'monday work management', and a 'See plans' button. The left sidebar shows a navigation menu with 'Home', 'My work', and 'Main workspace'. Under 'Main workspace', there is a search bar and a list of items: 'Welcome to your develop...', 'Hackathon', 'Testing Board', 'Tests for AI' (highlighted), and 'Report'. The main content area is titled 'Tests for AI' and shows a 'Main Table' view. A 'New Task' dropdown menu is open, displaying 'AI Assistant' and an 'AI suggestion' panel with options: 'Task Generator', 'Formula Builder', and 'Kowalski Analysis'. The table below has columns for 'Person', 'Status', 'Date', and 'Monitorowanie cz...'. The data rows are as follows:

| Person | Status | Date | Monitorowanie cz... |
|--------|---------------|--------|---------------------|
| LK | Working on it | Jun 21 | 44m 18s |
| | Done | Jun 17 | |
| | | Jun 23 | |



Thank you for attention!

