

## Project description

Create an API service that receives data about page views and compute behavioral stats about users in real-time.

Use case: this microservice can be integrated in the MadKudu's data pipeline to generate behavioral features. Those get sent to another microservice for real-time prediction of likelihood to buy models.

## Why this project

The objective is to make this a good and fun way to discover how it would look like working together on a data engineering project.

## Instructions

We can follow a standard development lifecycle.

1. Discussion on the PRD
2. Documentation of a light TRD
3. Quick end-to-end implementation with possibly a revisit of PRD or TRD (POC)
4. Full implementation including unit and function tests
5. Deployment and sign-off

The goal of this project is to get to know each other -> we don't need to do the full lifecycle, ie. there is no need for pushing the end-code to production.

Please do as much or as little as we want. **Expectations is to spend between 2 and 4 hours** of work to document a TRD (1-2 pages) and build a functional POC.

## How to make this project fun and effective

Here are some tips:

- This documentation is a starting point and we've deliberately left gaps. So feel free to ask clarifying questions and communicate regularly the same way you would do in a team.
- Iterate often and fast. Throw your notes in a TRD document. The idea of using a TRD is to explore quickly different technical design ideas and communicate on them. Using proper english or good fonts don't matter.

# Product requirements

## Endpoints

Create a API service with 2 API routes.

Call to send page view events

Send page view information to update the behavioral stats for a user.

```
POST /v1/page
```

Body of the POST:

```
{
  "user_id": "019mr8mf4r",
  "name": "Pricing Page",
  "timestamp": "2012-12-02T00:30:12.984Z"
}
```

Call to get a summary of the behavioral profile

Return the behavioral profile of a user.

```
GET v1/user/:userid
```

Returns

```
{
  "user_id": "019mr8mf4r",
  "number_pages_viewed_in_the_last_7_days": 21,
  "time_spent_on_site_in_last_7_days": 18,
  "number_of_days_active_in_last_7_days": 3,
  "most_viewed_page_in_last_7_days": "Blog: better B2B customer experience"
}
```

Bonus: Call to delete the profile of a user (GDPR)

Delete all data about a user, ie. the raw events data if stored, and the aggregated profile data.  
This is to be in compliance with GDPR requirements.

```
DELETE v1/user/:userid
```