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IronHack Amsterdam Project

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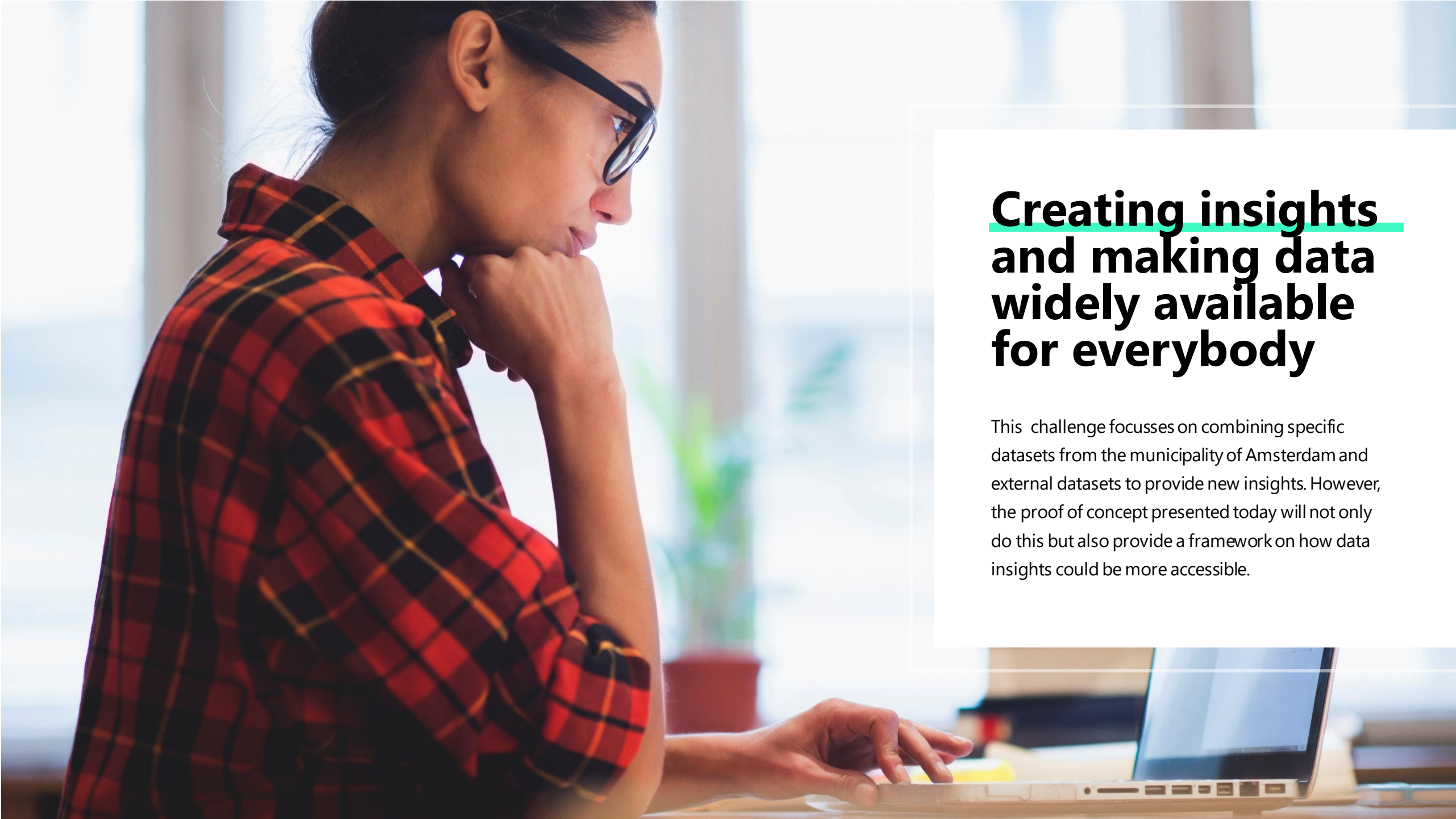


Creating insights and making data widely available for everybody

This challenge focusses on combining specific datasets from the municipality of Amsterdam and external datasets to provide new insights. However, the proof of concept presented today will not only do this but also provide a framework on how data insights could be more accessible.

Section Overview

Make waste interesting again!

The distribution of waste containers

Why waste retrieval is important

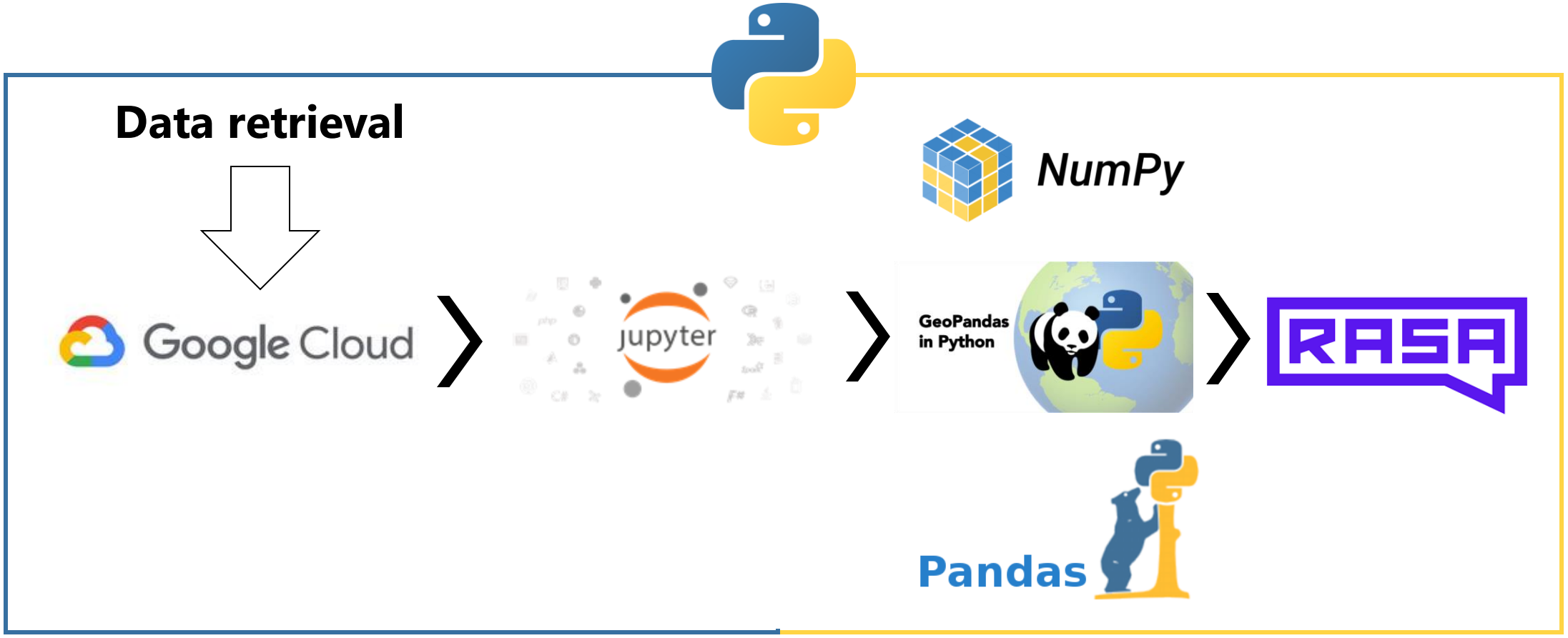
The most important reason for waste collection is the **protection of the environment** and the **health of the population**.

The distribution of waste containers in Amsterdam

With the opensource data from the municipality and the ambition to turn open source data into valuable insights the following framework has been developed.

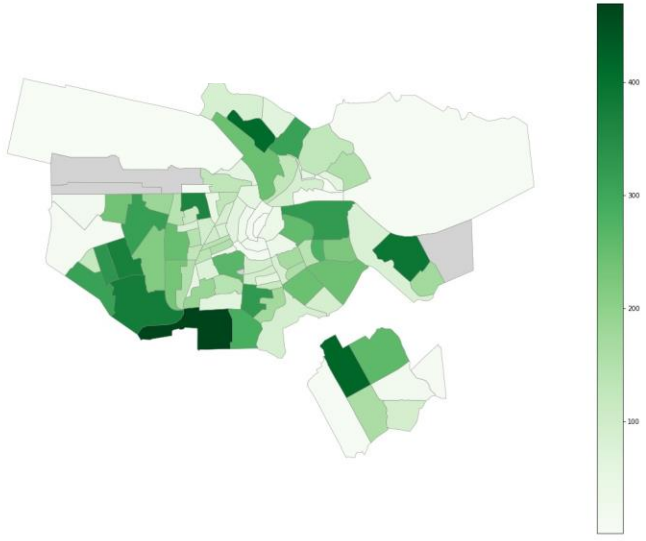
- Is the distribution of containers in the city fairly distributed across all sub-areas of Amsterdam?
- Is the distribution of containers in the city fairly distributed across the population?
- Does the number of planned containers is the right planning based on the current distributions across containers?

Architecture of the project

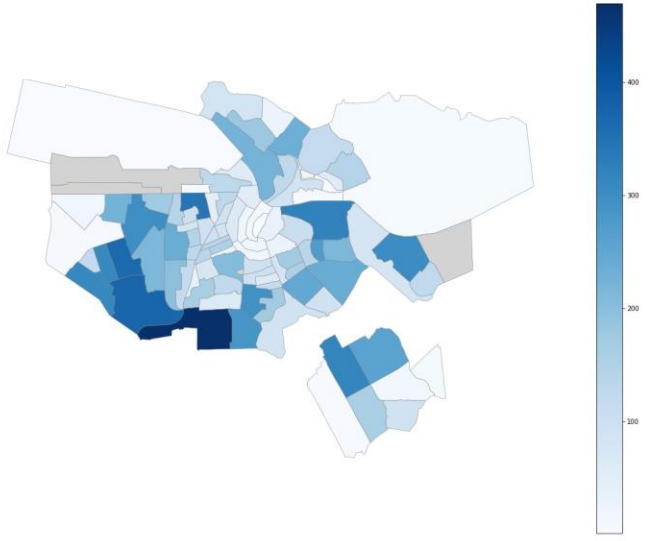


Results - Capita per Container

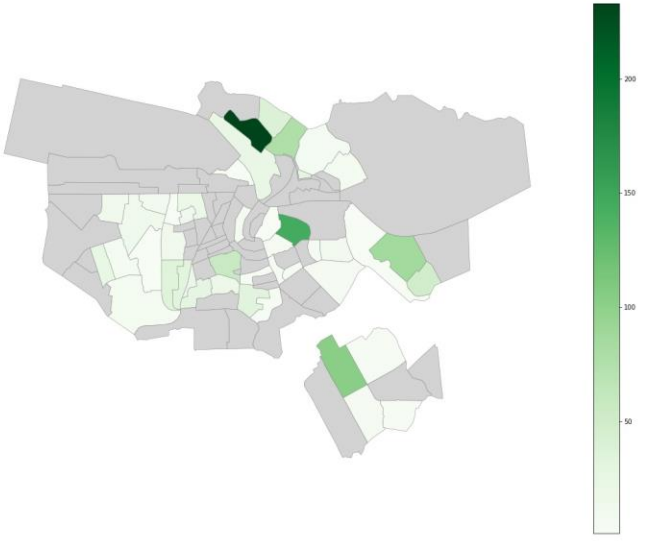
Active + Planned



Active

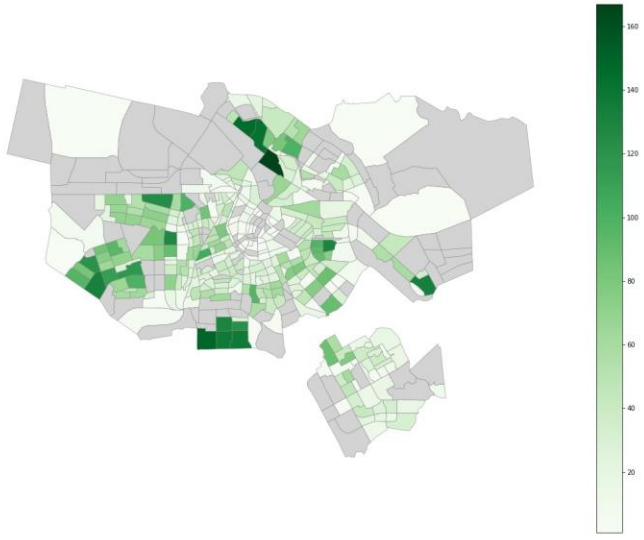


Planned

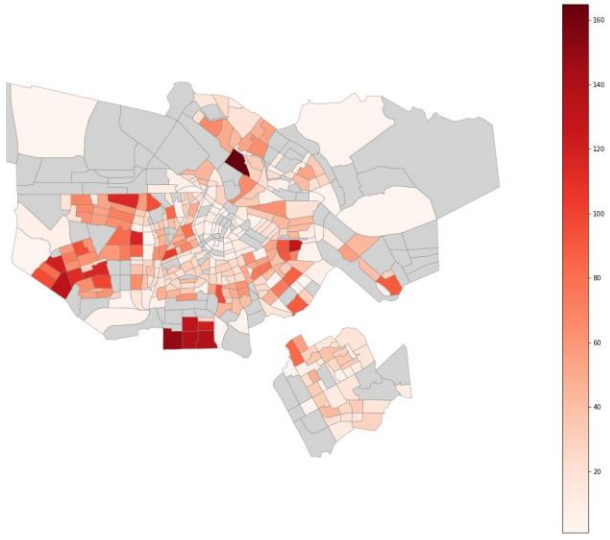


Results – Containers per neighborhood

Active + Planned



Active



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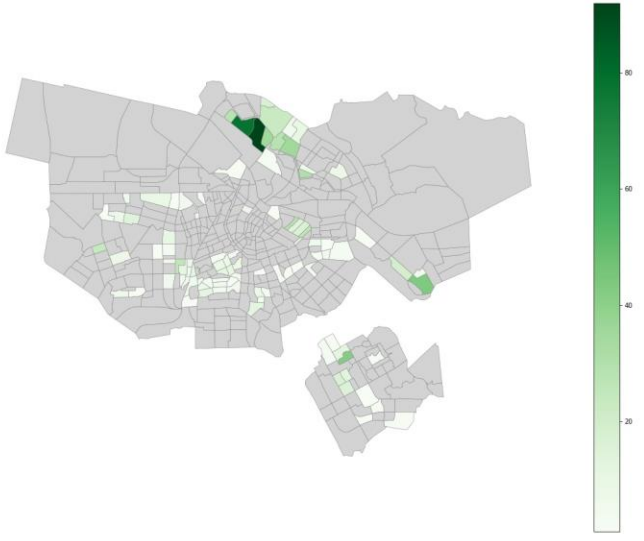
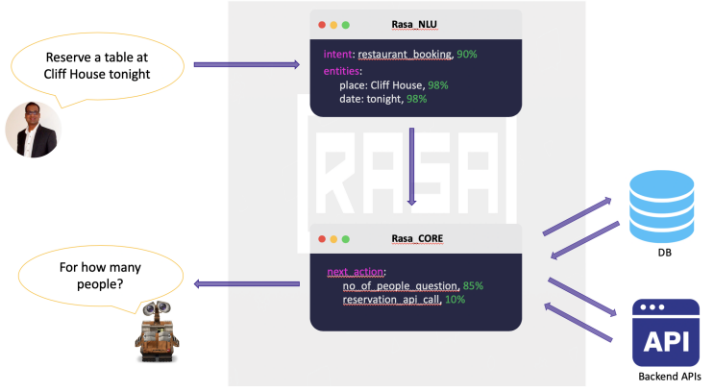


Damsco- The Intelligent Waste Retrieval Robot

A chatbot specially to create more intelligence from available from the city of Amsterdam



Encryption Technique

Caesar Cipher technique is a simple and easy method of encryption based on the ordinal values of the characters and the ASCI-II framework

Substitution

It's simply a type of substitution cipher, i.e., each letter of a given text is replaced by a letter some fixed number of positions down the alphabet. For example with a shift of 1, A would be replaced by B, B would become C, and so on.

Drawbacks

By the use of computational power Caesar cipher is easily hacked by using a cryptanalytic technique called brute-force. A brute-force attack tries every possible decryption key for a cipher. Nothing stops a cryptanalyst from guessing one key, decrypting the ciphertext with that key, looking at the output, and then moving on to the next key if they didn't find the secret message. Because the brute-force technique is so effective against the Caesar cipher, you shouldn't actually use the Caesar cipher…

Waste retrieval is important but data intelligence even more

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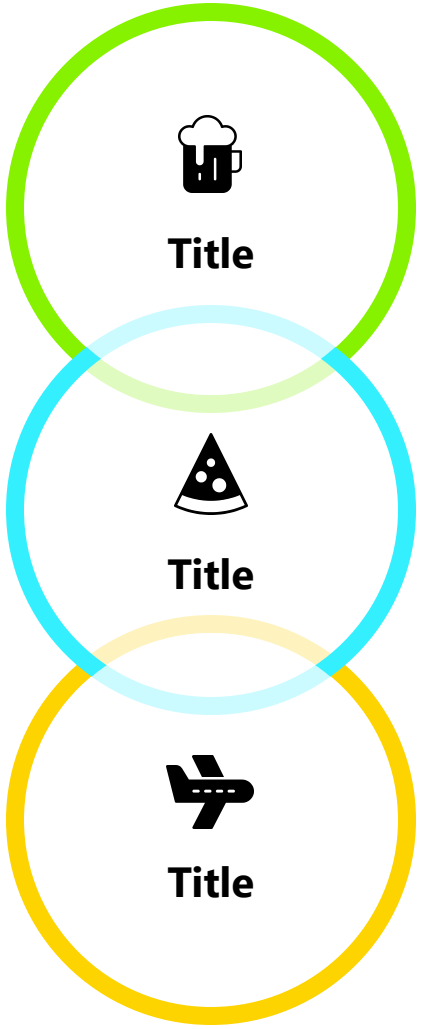

Analysis

Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book.

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Thank you.

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