



Curb the Violations

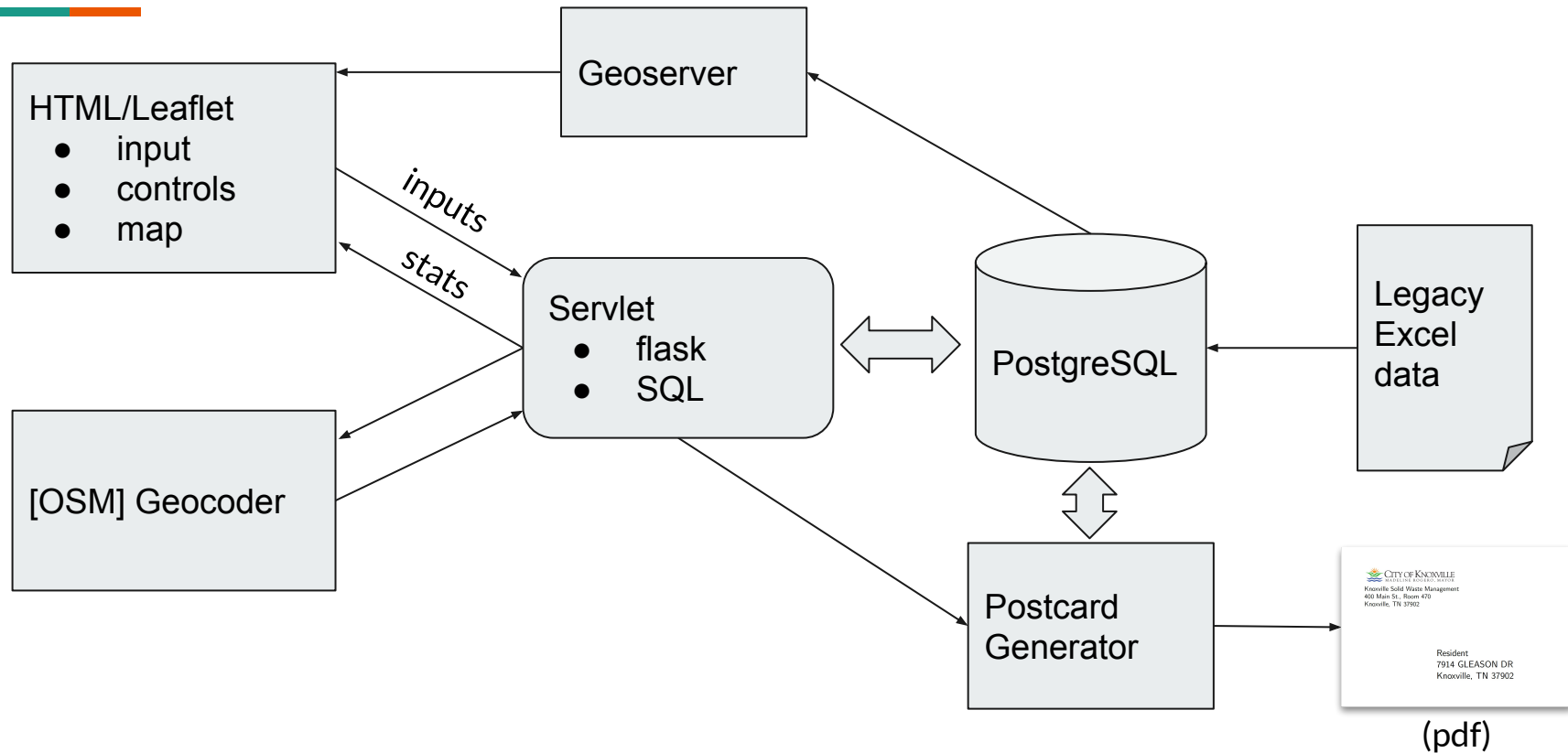
Effectively communicating with residents about curbside waste violations using automatically generated postcards



Design Principles

- Open source
- Microservices
- Containers

Architecture



Challenge - curbside violations

Responsive, tailored educational postcard to residents who don't set out properly

On occasion, residents don't set out their curbside trash or recycling correctly:

- trash carts may be placed too close to objects like telephone poles or cars
- trash may overflow out of the cart
- recycling carts may contain material that is not recyclable.

These missteps slow collection and can create unsafe or unsanitary conditions. Unfortunately, notification of these mistakes may be inconsistent, delayed, or confusing.





Our solution for generating postcards

- Postcard automatically created for addresses that had violations
- Can filter by number of violations
- Postcard notes the date and type of violation, and has optional comments from pick-up crew
- Handles edge cases of too many violations to fit on a card and empty violations records
- Generates a single PDF containing all postcards from LaTeX
- Has URL and QR code for site giving guidelines for putting out trash



Example of Generated Postcards

Dear City of Knoxville resident,

We had 71 problems collecting your trash in the period between 1/1/18 and 12/31/18, and show only the most recent four here.

- 3/28/18 Your trash was overflowing making it difficult to pick-up.
- 3/29/18 Your trash was overflowing making it difficult to pick-up.
- 12/30/18 Your trash was not out.
- 12/31/18 Your trash was not out.

Cordially,

Knoxville Solid Waste Management

http://knoxvilletn.gov/government/city_departments_offices/public_service/solid_waste



Knoxville Solid Waste Management
400 Main St., Room 470
Knoxville, TN 37902

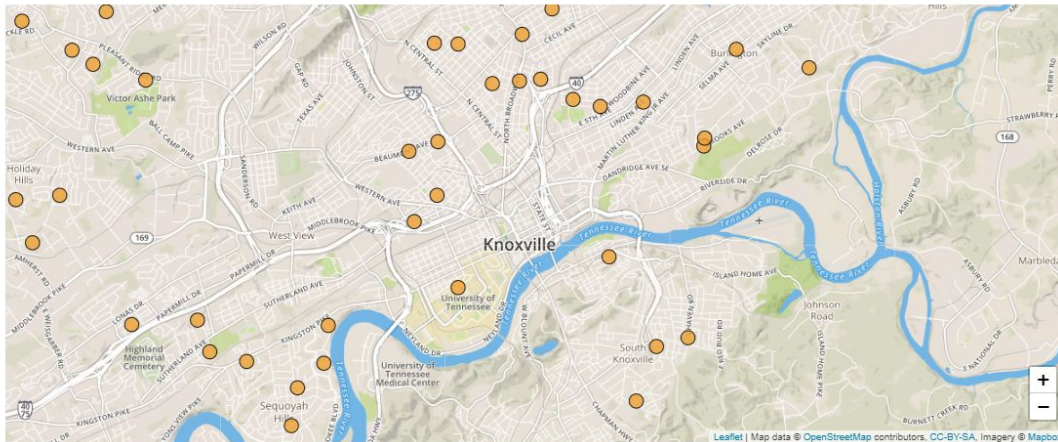
Resident
7914 GLEASON DR
Knoxville, TN 37902

Dashboard

- For internal department use
- Summaries and map of violations
- Form to enter a new violation

Curb the Violations

Generate Postcards



Report a Violation

Address

Enter address

Violation

Overflow
Not Out
Not at Curb

Details

Enter Details

Submit

Violation by Type

Type	Count
Overflow	10063
Not Out	34137
Not at Curb	737
Other	2189
Total	77126

Worst Offenders

7914 Gleason Dr	72
3104 N Broadway	30
2915 Island Home Ave	24
500 Riverfront Way	16
1225 Willow Ave	15
3131 Morris Ave	10