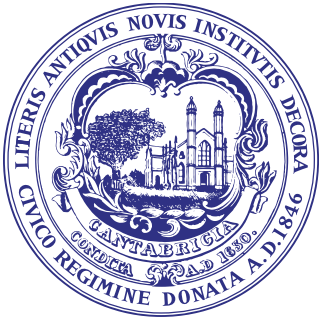




CITY OF CAMBRIDGE

VIBE CODING CAMBRIDGE OPEN DATA

JULY 21, 2026

What we'll cover

1. Intro: Cambridge Open Data
2. What is vibe coding?
 - The "loop" (tell the AI what you want, assess what it produces, refine)
3. "Agentic Coding Harness" (ChatGPT Codex)
4. Project #1: Analysis
 - Prompts and reverse prompts – you don't even need to know what to ask
5. Project #2: Dashboard/Explorer
 - Core concept: making something vs. Chat
 - Projects=folders. Digital artifacts
6. Project #3: Game!
 - Play is a great way to learn. Vibe code on your phone
7. What next?
8. Unrecorded Q&A

All of our examples will be real Cambridge Data available on the Open Data Portal:

data.cambridgema.gov

The concepts are more complicated than the process. We will introduce most concepts as we go through the examples

Who are we?

Alix Epstein

- Systems Data Analyst
- College librarian
- Public health background
- Running, trivia, crossword puzzles

Reinhard Engels

- Data Analysis & Open Data Program Manager
- Also an ex-librarian!
- Bioinformatics visualization at the Broad Institute
- Library Technology at Harvard and Cambridge Public Library

The Cambridge Open Data Program

- **A set of systems, technologies, and policies for maximizing the value of Cambridge's data by sharing it, enabling city staff and the public to use it in various ways, making sure businesses have access to it free of cost, and removing barriers between city departments in data sharing**
- **Fostering transparency, encouraging community engagement, stimulating innovation – while prioritizing privacy and data security**



What is Vibe Coding?

- Coding in English
- Asking questions
- Talking about what you want (a prompt), seeing what the **AI** does, then talking about what you want changed, then what you want changed, then what you want changed...

TRADITIONAL CODING AND VIBE CODING		
Dimension	Traditional coding	Vibe coding
Language	Programming languages such as Python or JavaScript	Natural language such as English
Granularity	Detailed, step-by-step instructions	High-level goals
Who does the “coding”?	Skilled programmers	Anyone!
End product	A computer program	Anything a computer can do or make. The underlying code is often an invisible means to an end.

Agentic Coding Harness

Model (ChatGPT, Gemini, Claude) - (text, code, images). Raw intelligence from the cloud*.

Harness (Codex, OpenCode, ClaudeCode, Cursor, Pi) - manages the model (and permissions, preferences, tools). Software you install on your computer* that hitches the model to perform useful work.

Agent: a model + harness combo that performs multistep work using external tools.

- *Usually. It is possible to run local models on your computer and vibe code in the cloud, but typically the model is in the cloud and the harness is on your computer.*



ChatGPT (Codex)

FileEditViewHelp

Codex

New task

Scheduled

Plugins

Pull requests

Chat

Projects

vibe-coding class

Analyze public art dataset

Tasks

AI prompts and reverse prompts

Set up Codex workflow

What should we build?

Explore and understand code

Build a new feature, app, or tool

Review code and suggest changes

Fix issues and failures

vibe-coding classLocalmaster

Do anything

Ask for approval

5.6 Luna Medium

CITY OF CAMBRIDGE

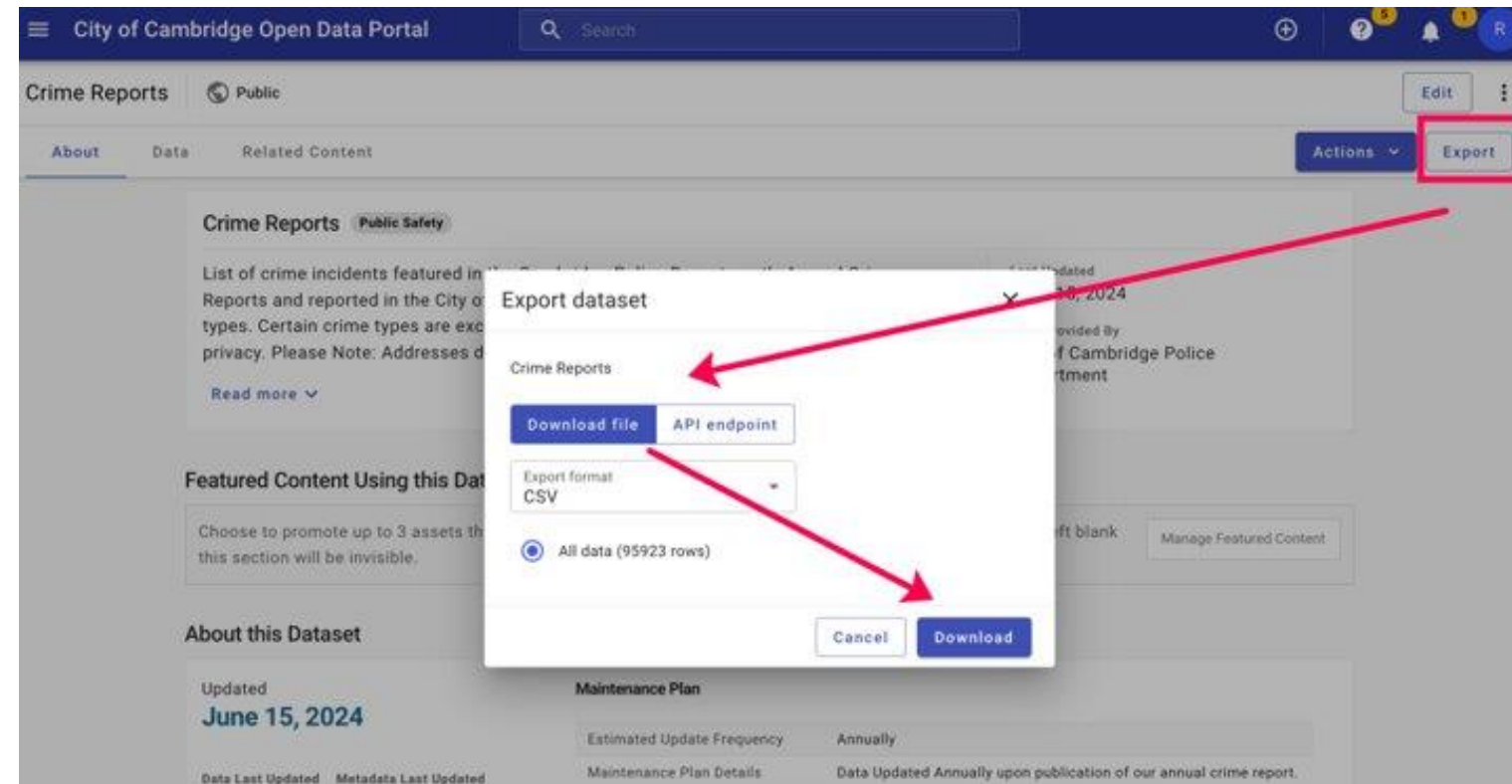
Alix Epstein

7

AE

Analyzing a Data Set

Download the data set as a CSV



Analyzing a Data Set

What do we want to know about this data set?

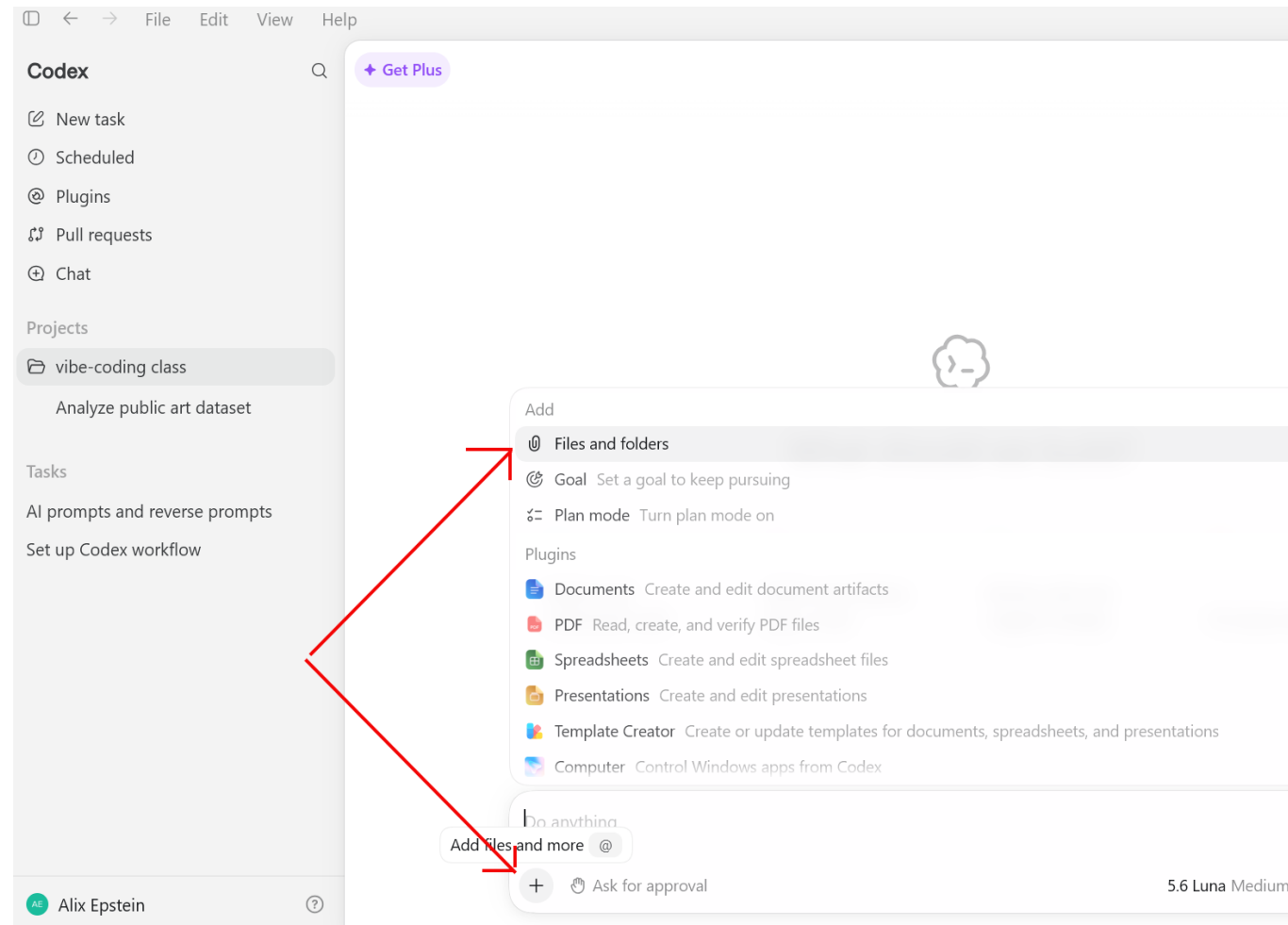
Why do we want to know?

What's interesting about this data set?

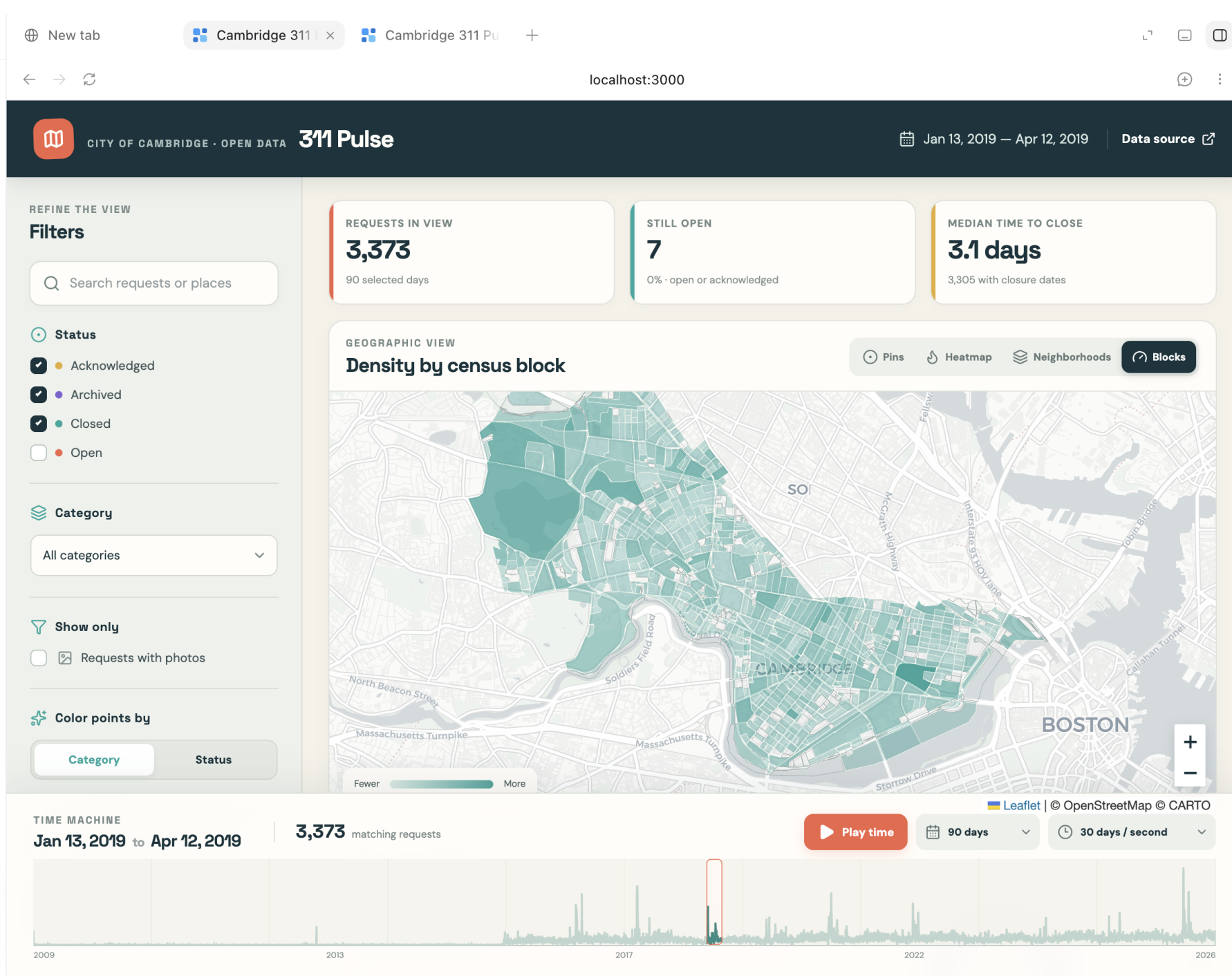
What questions can this data answer?

What is missing from this data?

What questions CANNOT be answered by this data?



Show less ^



Show less ^

I'll build this as a workshop-ready playable prototype, using the Sites workflow for the web app and checking the live Cambridge Open Data catalog so the four datasets, fields,  API calls are real. I'll also carry over the useful preload/local-play lessons from the earlier Cambridge explorer work, then test the actual keyboard/touch interactions before handing it

5.6 Sol High 

RE

What next?

- **Track versions and share code with github**
- **Publish sites with github pages**
- **Public sites with ChatGPT sites**
- **Claude Code**
- **"3rd party harnesses"**
- **Plugins**
- **Computer use / Browser use**
- **Remote coding**
- **Too much! Don't let it overwhelm you. Try stuff and have fun.**

Thank you!

- **You will receive an email link to these slides and a feedback form**

- **Feedback form: do it now! QR code and link**

- **Anonymous**
- **What you thought of this class**
- **Suggestions**

- **Email us: `OpenData@CambridgeMA.gov`**

<https://cambridgema.jotform.com/262014443205848>

