AI tech for adaptive agriculture

Vibe coding for Agricultural applications

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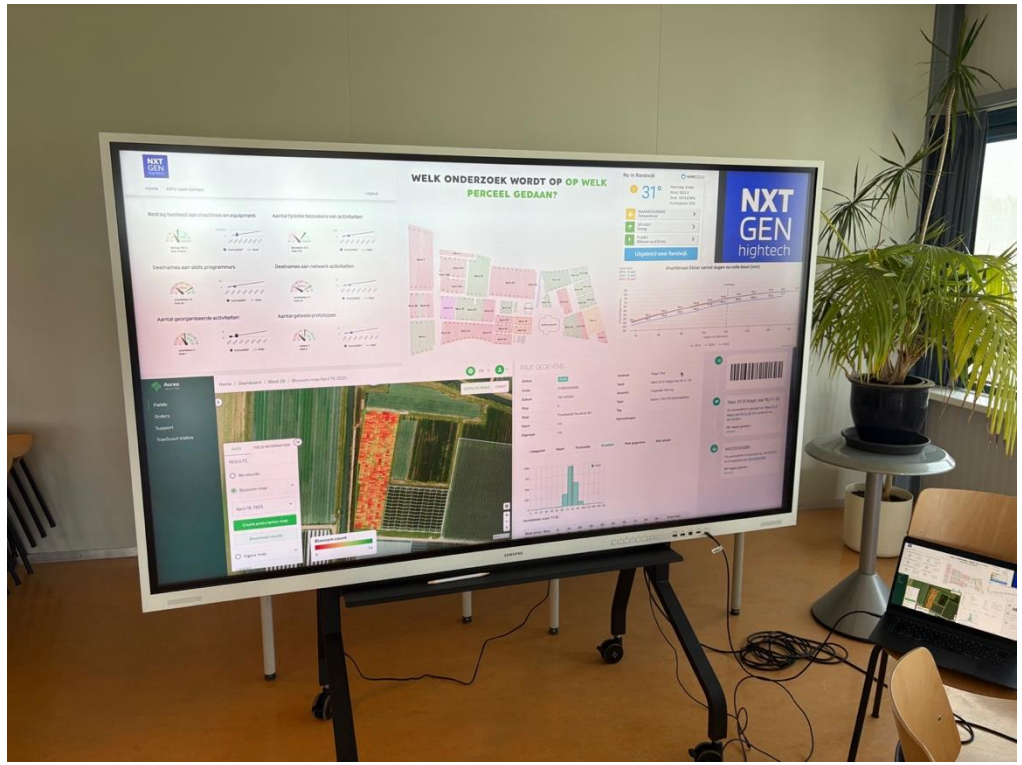
Agenda

- 14:15 – 14:20 Welcome & objectives
- 14:20 – 14:35 Intro: Why vibe coding?
- 14:35 – 14:40 Case introduction
- 14:40 – 15:25 Group work: build your own app
- 15:25 – 15:45 Group pitches & wrap-up

Why vibe coding?

- Fast prototyping for interactive, adaptive dashboards.
- Bridges creative coding and data visualization.
- Great for living lab and agricultural demo contexts.
- Not ideal for large-scale production or heavy data pipelines

Examples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WALABI
Wageningen Lab for Agri-Food Business Informatics
Driving innovation through business informatics in the agriculture and food industry
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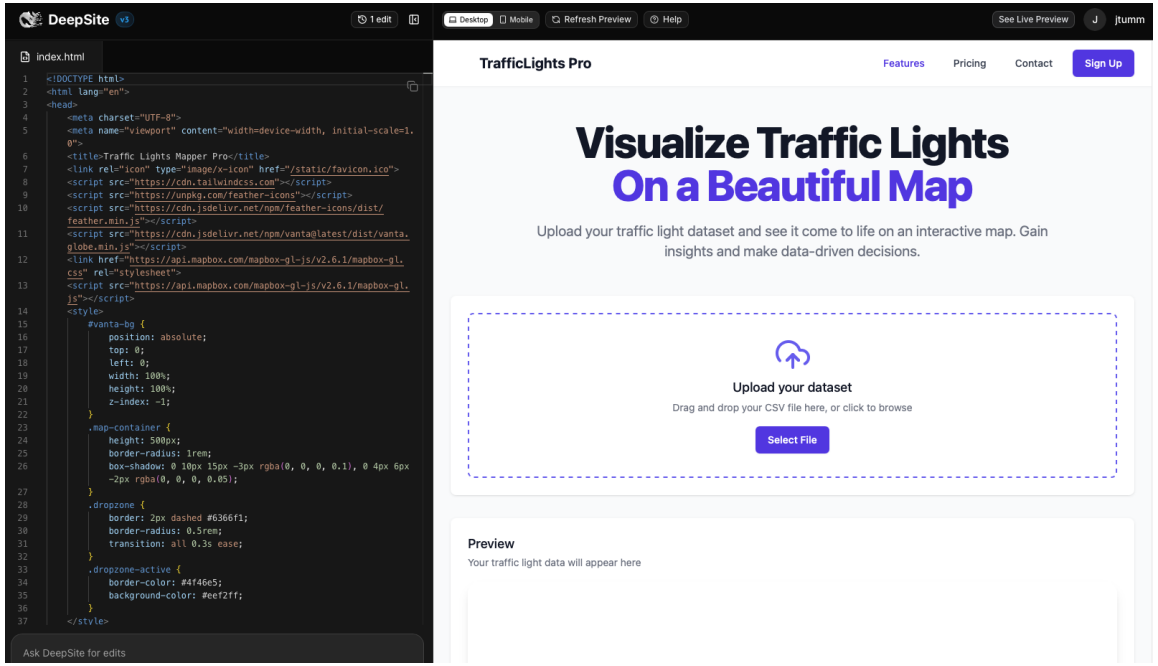
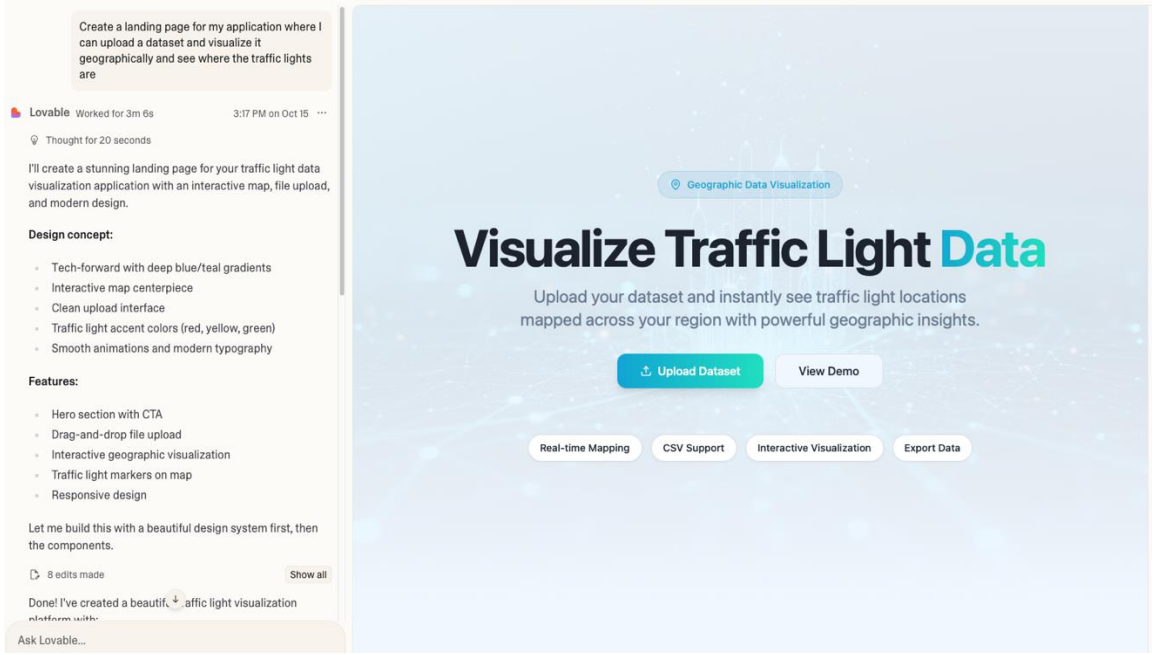
About WALABI
WALABI is the research laboratory of Wageningen University in the field of business informatics in the agri-food industry. We believe that digital innovations in the agri-food domain are not goals in themselves, but means to improve sustainability and deliver value to end users.
WALABI strives to achieve this through impactful, collaborative, and rigorous research in business

Tools without coding experience

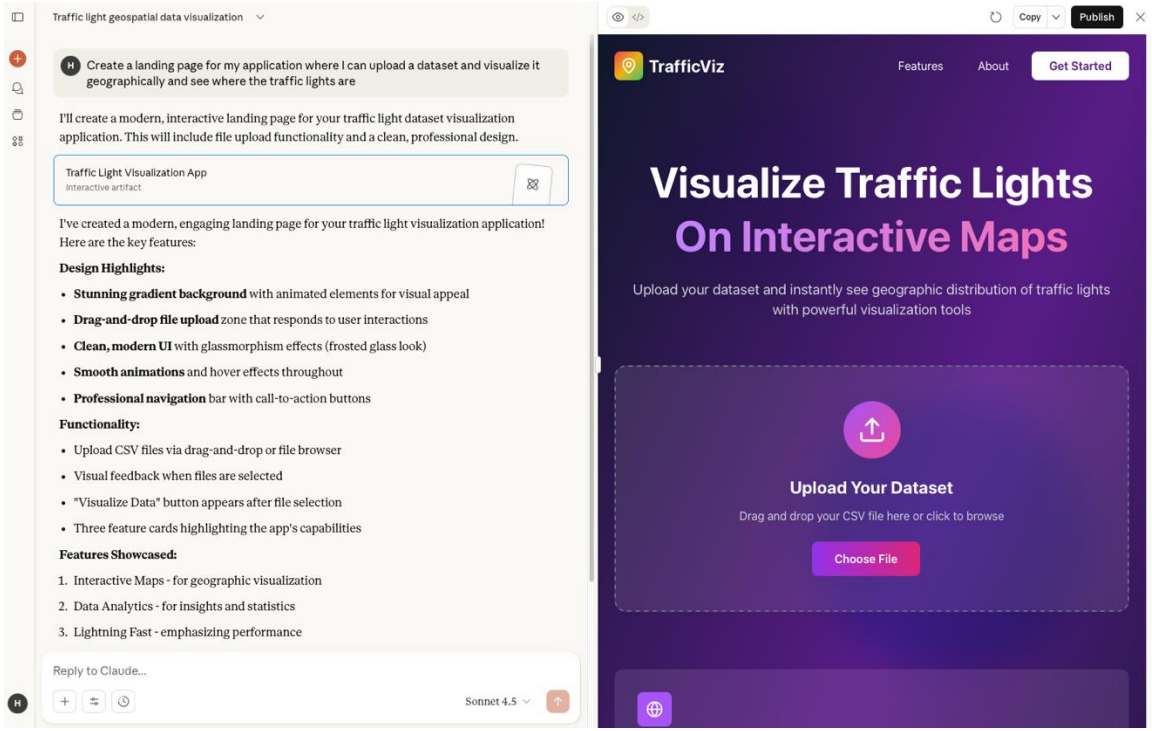
- Lovable https://Lovable.dev Free test plan of five requests
- Deepsite: https://enzostvs-deepsite.hf.space
- Claude.ai (free version)

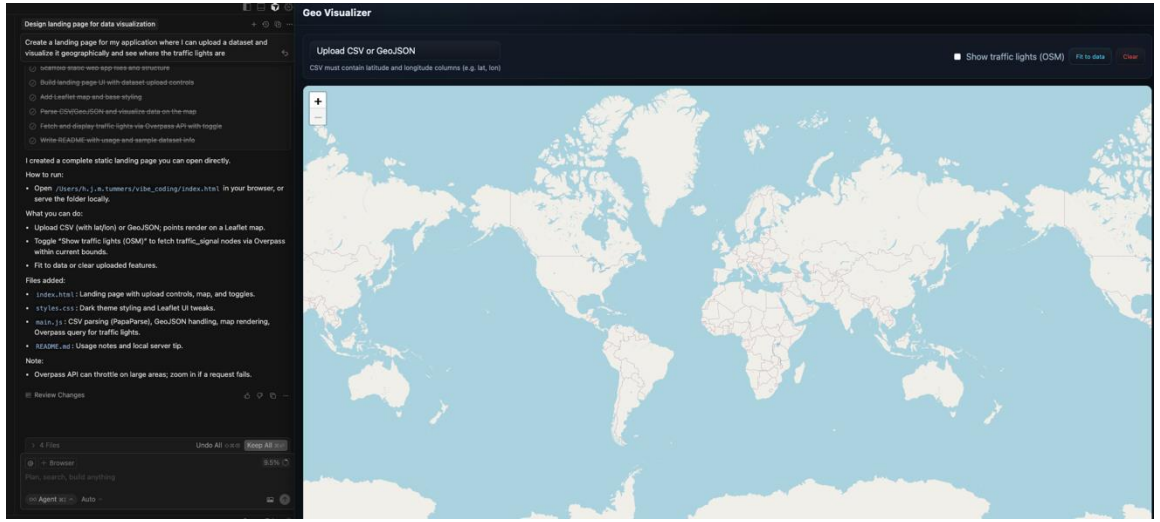




Tools with coding experience

- Cursor AI https://cursor.com Free Hobby plan
- Claude.ai (free version)





Prompt engineering

1 Define your application type

Web dashboard, desktop app, notebook, or mobile prototype — specify it clearly.

2 Describe user interaction

State how users will interact (dropdowns, maps, exports, offline use).

3 Anchor your data

List column names or key variables — avoid vague “data” references.

4 Fix your tech stack

Tell it exactly what to use (React, Streamlit, Electron, etc.)

5 Iterate, don’t overload

Generate structure → logic → style → real data in small steps.

6 Use style anchors

Guide visuals (“minimal dashboard, white background, soft colors”).

7 Clarify roles

Say what you’ll handle manually vs. what the AI should build.

Hosting

- Local
- Github pages

Example

Concept:

- A mock interface for tracking growth stage of three crops (e.g., tomato, lettuce, potato) with simple icons or progress bars.

- **Prompt example:**

- *Build a small html web based dashboard app that visualizes growth progress for three crops — tomato, lettuce, and potato. Each crop has three fake metrics: growth stage (1–5), health score (0–100), and days since planting. Visualise it on a map. Represent growth with a progress bar and health with an emoji. Include a "Next week" button that increases the days and updates growth randomly. Use bright, flat colors and clear labels.*

Group Work Instructions

- **Task:** build or sketch your own vibe-coded app idea.
- **Groups:** 4–5 people.
- **Deliverable:** a short 2-minute pitch — what it does, who uses it, what data it needs.
- **Tips:** choose 1 use case, 3 functions, 1 visualization.

Materials

- Github.com/TeamWalabi

Group Pitches