

Enhanced Data Capture for 3D Printing: Low-Code Interface Project

Peter Lindecke · Simon Schauß · Kyuri Kim · Lea Cottel · Varad Kulkarni · Rishi Tank · Saina Pattanayak · Ishikasingh Gaur

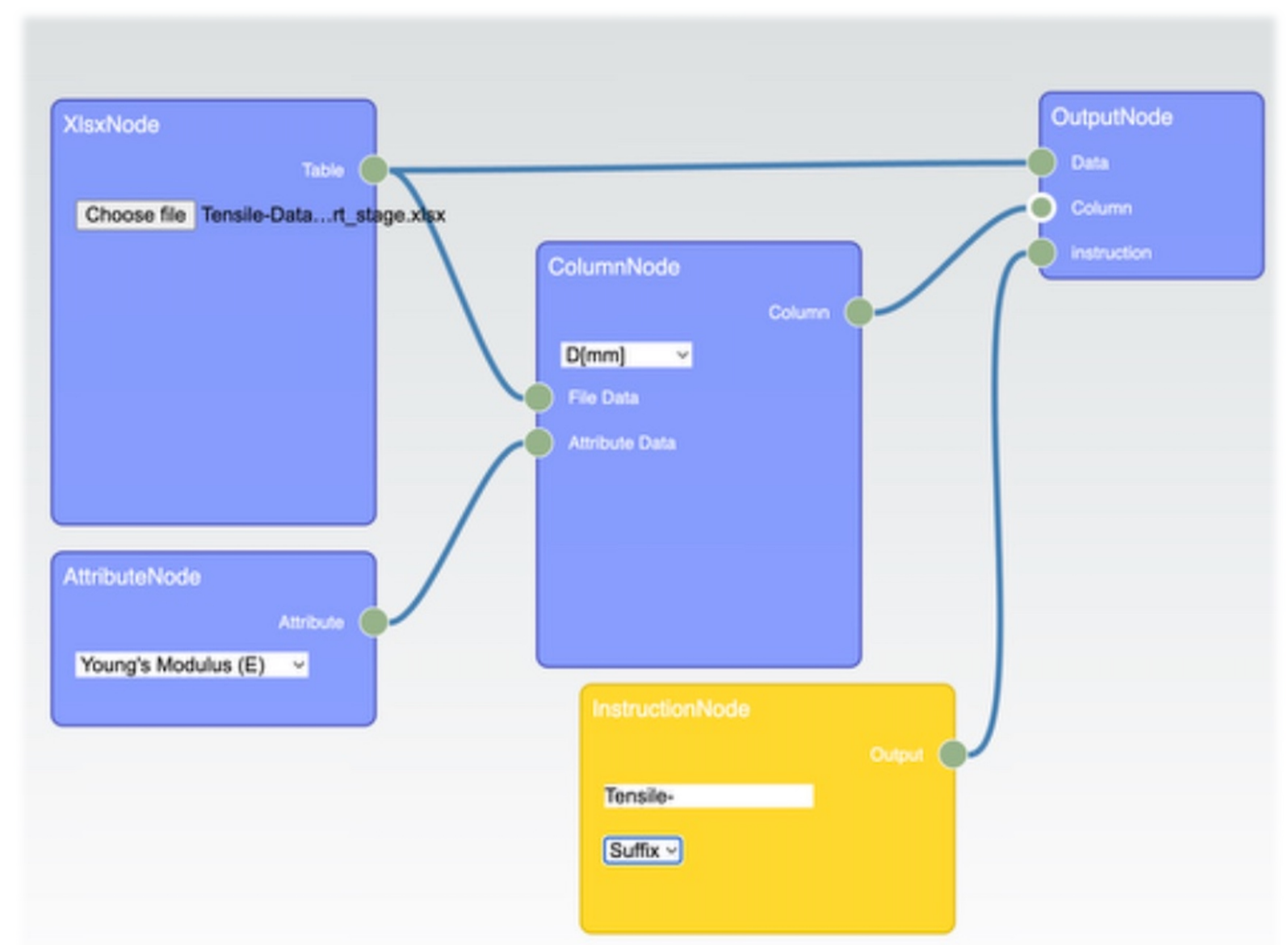
Problem Statement

The 3D printing industry faces inefficiencies in data capture during the production process, leading to missed opportunities for optimization. The current manual data collection methods using Excel and PDF documents are labor-intensive and need to be adaptable without requiring programming knowledge. We aim to solve this by developing a user-friendly low-code interface that streamlines data capture and allows for easy customization.

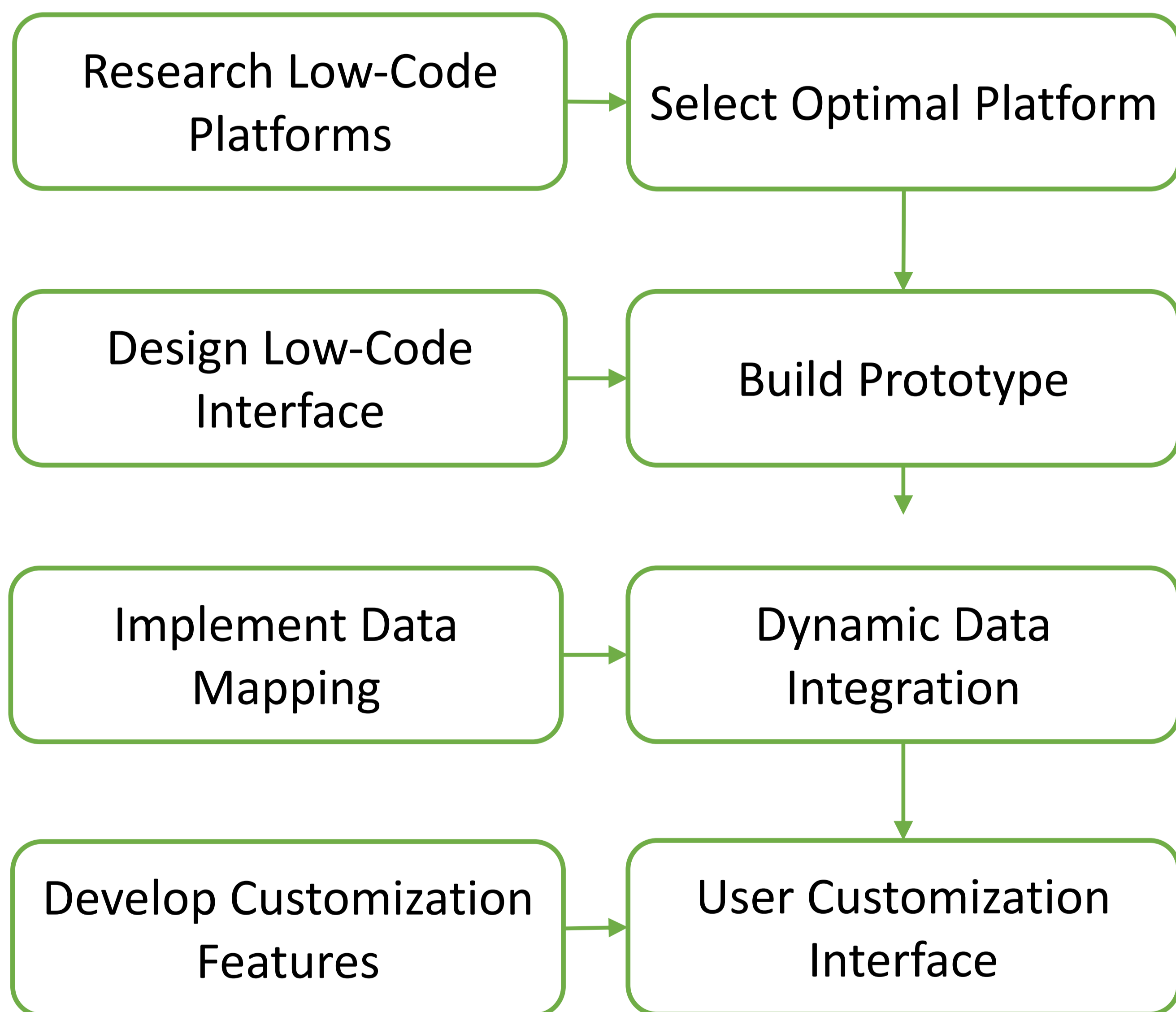
Tasks



Node Diagram



Development Process



Output in Log Console

```
Data passed from Column Input: editor.tsx:254
▶ (2) ['c-1', 'a-1']

Column Names: editor.tsx:255
(14) ['D[mm]', 'So[mm²]', 'L0[mm]', 'Lu[mm]', 'Aman[%]', 'Z
▶ [%]', 'E[GPa]', 'Rp0,2[MPa]', 'Rm[MPa]', 'A[%]', 'Ag[%]', 'A
t[%]', 'Fmax[kN]', 'Hinweis']

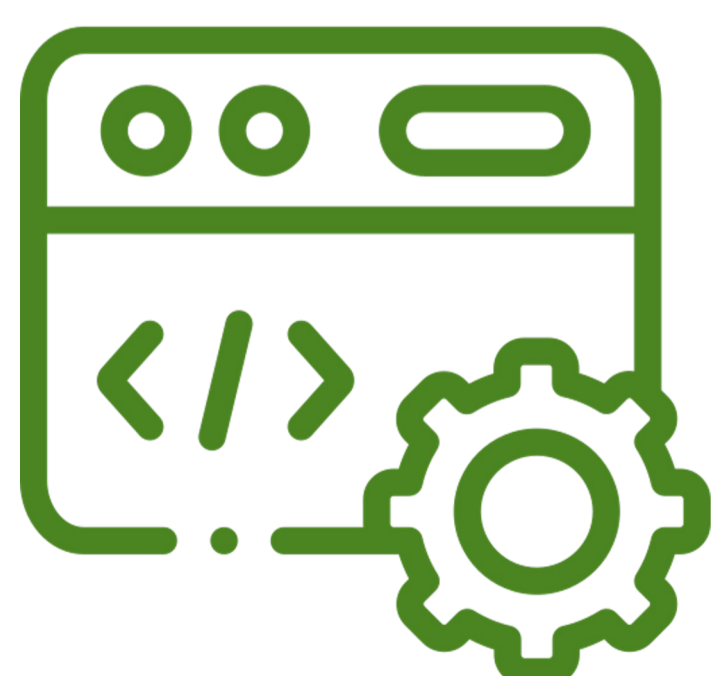
Row Names: editor.tsx:256
▶ (7) ['v-1', 'v-2', 'v-3', 'v-4', 'v-5', 'v-6', 'h-1']

Values: editor.tsx:257
▶ {D[mm]: {...}, So[mm²]: {...}, L0[mm]: {...}, Lu[mm]: {...}, Aman
[%]: {...}, ...}
```



Review and Summary

Development Progress



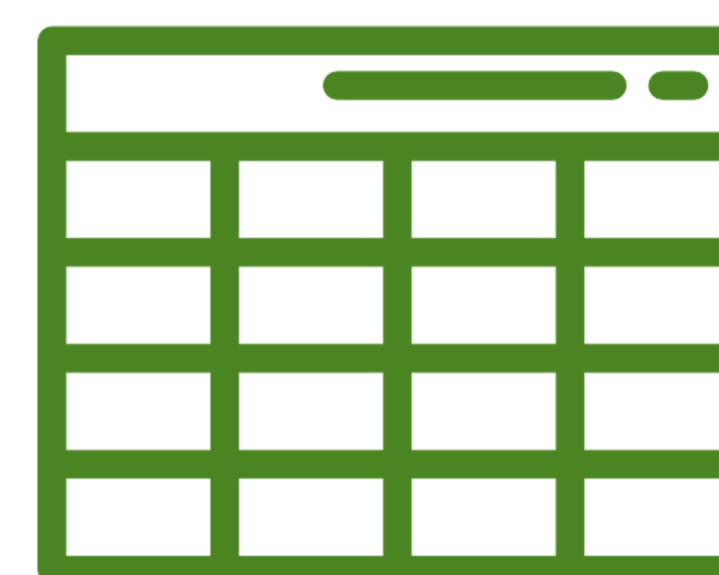
Implemented file import & column-to-attribute mapping feature

Enhancement



Improved understanding of requirements, utilized provided examples for clarity, and acquired new skills

Measurements



Developed Excel file import and attribute mapping in generating build job names & values from at least 3 different input files

Timeline



Established functionality for improved data management efficiency