

## Description of key algorithms

Below is a subset of algorithms for our codebase, selected for adhering to certain criteria:

- **Unusual/novel algorithms**
- **Algorithms that transform data**
- **Mechanisms for importing data from 3rd party systems**

### **Subject Space Creation Workflow**

Location: BaseTemplatesSection

- Handles creation of new coordinator workspaces via API call.

### **Template Duplication Workflow**

Location: CustomTemplatesSection

- Duplicates an existing template instance, enabling users to reuse and modify templates.

### **Excel Export Generation**

Location: ExportButton

- Converts HTML table into an Excel workbook and triggers a .xlsx download.

### **AI Usage Scale PDF Generation**

Location: ExportButton

- Generates a custom-formatted PDF with AI scale information from table data.

### **Create From Scratch Workflow**

Location: App

- Sends a POST request to create a new template, validates the response, updates state, and opens the new template page.

### **Custom Templates Fetch Workflow**

Location: MainTemplate

- Fetches user-specific templates from backend.

### **Base Templates Fetch Workflow**

Location: MainTemplate

- Fetches global base templates from backend.

### **Template Save Workflow**

Location: UseScalePage

- Saves a template to backend, validating subject existence and handling creation/reassignment flows.

### **Drag-and-Drop AI Scale Level Assignment**

Location: TableSection

- Handles dropped AI level data and updates corresponding row fields.

### **Subject Metadata Synchronization**

Location: TableSection

- Fetches subject info from backend and updates parent component.