The awesome list of official statistics software: a community approach to software sharing in the ESS

www.awesomeofficialstatistics.org

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Concepts

• How do we know what’s already there?
• Offstats landscape getting more complex and dynamic
• Maintain an awesome list

81 and counting...
**Awesome official statistics software**

### Overarching Processes

<table>
<thead>
<tr>
<th>Specify needs</th>
<th>Design</th>
<th>Build</th>
<th>Collect</th>
<th>Process</th>
<th>Analyse</th>
<th>Disseminate</th>
<th>Evaluate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Identify needs</td>
<td>2.1 Design outputs</td>
<td>3.1 Reuse or build collection instruments</td>
<td>4.1 Create frame and select sample</td>
<td>5.1 Integrate data</td>
<td>6.1 Prepare draft outputs</td>
<td>7.1 Validate outputs</td>
<td>8.1 Gather inputs</td>
</tr>
<tr>
<td>1.2 Consult and confirm needs</td>
<td>2.2 Design variable descriptions</td>
<td>3.2 Reuse or build processing and analysis components</td>
<td>4.2 Set up collection</td>
<td>5.2 Classify and code</td>
<td>6.2 Validate outputs</td>
<td>7.2 Produce dissemination products</td>
<td>8.2 Conduct evaluation</td>
</tr>
<tr>
<td>1.3 Establish output objectives</td>
<td>2.3 Design collection</td>
<td>3.3 Reuse or build dissemination components</td>
<td>4.3 Run collection</td>
<td>5.3 Review and validate</td>
<td>6.3 Interpret and explain outputs</td>
<td>7.3 Manage release of dissemination products</td>
<td>8.3 Agree an action plan</td>
</tr>
</tbody>
</table>

- **Access to official statistics (GBS BPM 7.4)**
  - R package rdsdm. Easy access to data from statistical software.
  - Contains a list of SDMX access points of various national statistical offices.

- **Statistical Dissemination (GBS BPM 7.2)**
  - Java application SDMX Converter. Converter between different SDMX standards.

### Technical Details

- **Data integration and record linkage (GBS BPM 5.1)**
  - R package reclin. Functions to assist in performing data linkage.
  - Comparing records, em-algorithm for estimating parameters.
  - Use for pre- and post-processing for machine learning, data cleaning.

- **Data integration and record linkage (GBS BPM 5.2)**

- **Data integration and record linkage (GBS BPM 5.3)**

### Languages and Libraries

- **R**
- **Java**
- **Node.js**
- **Python**
- **Fortran**
- **JSON**
- **geojson/topojson**

- **stringdist and fuzzyjoin** allow for matching and linkage.
- **XBRL**. Extraction of Business Financial Statistics Canada via TSD package pyxbWRAPPER. Access to open data.
- **package pxweb**. Generic interface for the PX-Web/PMF Interface.
- **package PxWebApiData**. Easy API access to e.g. Statistics Canada data.
- **package rdbnomics**. Access to the DBnomics database for INSEE, Eurostat, World Bank, etc.
- **package readafs**. Download data from the Australian Bureau of Statistics.
Awesome list promotions

- Unece SDE ‘17
- Unece SCFE ’17
- uRos ‘18
- Unece SDE ’18
- Estat validition projects/grants ‘17 - ‘18
- uRos ‘19
- Unece modernstats ‘19

Wear the badge!