<table>
<tr><td>Title</td><td>SCADA</td></tr>
<tr><td>Creator / Responsible Partner</td><td>CRF</td></tr>
<tr><td>Dataset Identifier</td><td>08_AnonymisedMESCRF_I-BiDaaS_WP2_D2.1_v0.1.7z</td></tr>
<tr><td>DOI</td><td>10.5281/zenodo.4265324[1]</td></tr>
<tr><td>Dataset Description</td><td>The dataset contains sensors data of welding process in the sub-assembly lines of the vehicle. Different types of sensors are installed on the production line and acquire different data information (e.g. acceleration, velocity, pressure, temperature and so on). All of the sensors record their perception of the surroundings, uploading and transfer this information to a server that manages the data. For example, accelerometers are used for measuring vibration and shock on machines and basically anything that moves. Therefore, the monitoring of vibrations is important to check the status of a machine and the analysis of the trend of vibrations over time allows to predict the onset of deterioration and to intervene in time before the failure for the Predictive maintenance. This dataset can be used to analyse sensor data and obtain thresholds for anomalous measurements. There are 147 sensors, listed by categories as follows:
<table>
<tr><td>Number of sensors</td><td>Physical quantity measured</td><td>Unit of measurement</td></tr>
<tr><td>87</td><td>Acceleration</td><td>mg</td></tr>
<tr><td>30</td><td>Velocity</td><td>mm/s</td></tr>
<tr><td>9</td><td>Temperature</td><td>°C</td></tr>
<tr><td>8</td><td>Pressure</td><td>bar</td></tr>
<tr><td>8</td><td>Flow</td><td>l/min</td></tr>
<tr><td>1</td><td>Displacement</td><td>mm</td></tr>
<tr><td>2</td><td>Energy vector (water)</td><td>l</td></tr>
<tr><td>1</td><td>Energy vector (air)</td><td>m^3</td></tr>
<tr><td>1</td><td>Energy vector (air)</td><td>m^3/h</td></tr>
</table>
SCADA to obtain thresholds for anomalous measurements for all sensors</td></tr>
<tr><td>Work Package/Deliverable</td><td>WP2/D2.1</td></tr>
<tr><td>Source</td><td>Data have been retrieved from sensors mounted on several machines (e.g. linear stages, robots, elevators) along the production line of vehicles. We focused on welding lines in which robotic is used to assembly vehicles' components and flexibility is required for the continual changes of the types of components and vehicles.</td></tr>
<tr><td>Processing</td><td>Data have been processed following CRF rules</td></tr>
<tr><td>Repository</td><td>Zenodo</td></tr>
<tr><td>Language</td><td>English</td></tr>
</table>

[1] https://doi.org/10.5281/zenodo.4265324

This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No 780787.

<table>
<tr><td>Code list</td><td>
<table>
<tr><td></td><td>Id</td><td>Value</td><td>Unit</td><td>Timestamp</td></tr>
<tr><td>Example</td><td>667</td><td>49.75</td><td>mg</td><td>23/04/2018</td></tr>
</table>
‘Id’ column reports the number that identifies the specific sensor. The other columns report on the value of the specific sensor, the unit of measurement and the timestamp.
</td></tr>
<tr><td>Type</td><td>Number</td></tr>
<tr><td>Format</td><td>csv</td></tr>
<tr><td>Expected Size</td><td>20.1 GB</td></tr>
<tr><td>Keywords</td><td>sensor data</td></tr>
<tr><td>Version</td><td>V0.1</td></tr>
<tr><td>Date of Repository Submission</td><td>07/12/2020</td></tr>
<tr><td>Necessary software</td><td>• any software enable to open formatted txt files (Notepad, Excel ...) is sufficient to view them
• the software to analyse data depends on the type of analysis</td></tr>
<tr><td>Rights</td><td>CRF</td></tr>
<tr><td>Access Information</td><td>Open</td></tr>
</table>

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