

Feature Aggregation in Process Mining User Manual

January 7, 2022

1 Prerequisite

Make sure Docker is installed on your system. If not it can be installed from <https://docs.docker.com/desktop/windows/install/>.

2 Start the Application

1. clone the application from:
`https://github.com/KLiehr/WS2122---Feature-Aggregation-and-Clustering/tree/master3`
2. open the command prompt and navigate to the directory folder of the application
3. Build the docker image using command:
`docker build . -t feature_agg`
4. Run the docker container using command:
`docker run -t -p 8000:8000 feature_agg`
5. Open `http://127.0.0.1:8000/` or `http://localhost:8000/` in browser to start the application

3 Upload Event log

1. Press **Import File** listed under **Event Log Management**
2. Press **Choose File**
3. Select the event log you want
4. Press **Open** to upload the event log
5. Press **Upload EventLog**
6. The uploaded eventlog can now be selected

Event Log Management ▾
 Import File **1.**
 Derive Attributes
 Filter Event Log
 Analyse Event Log

Event Logs

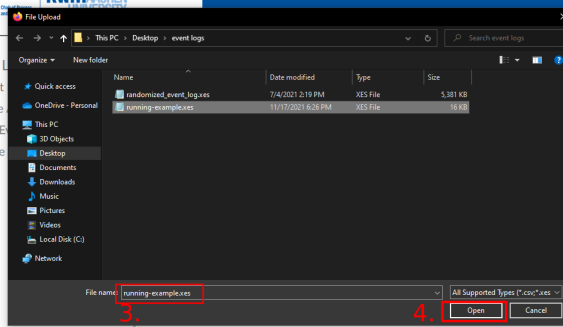
Event Log: **2.** Choose File No file chosen
 Upload EventLog

Set
Delete

Download

Event L
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Event Logs



Set
Delete

Download

Event Log Management ▾
 Import File
 Derive Attributes
 Filter Event Log
 Analyse Event Log

Event Logs

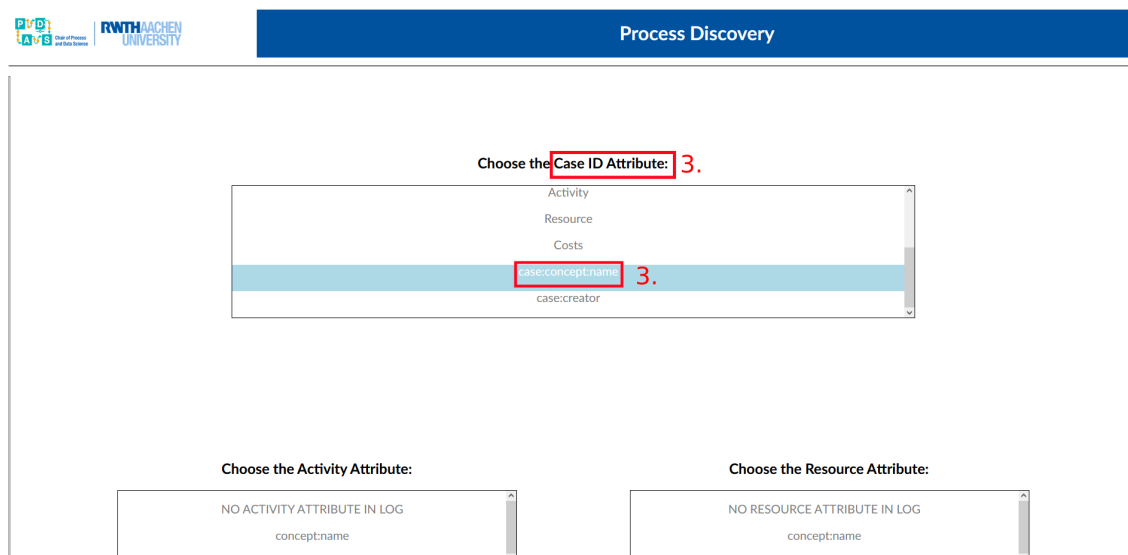
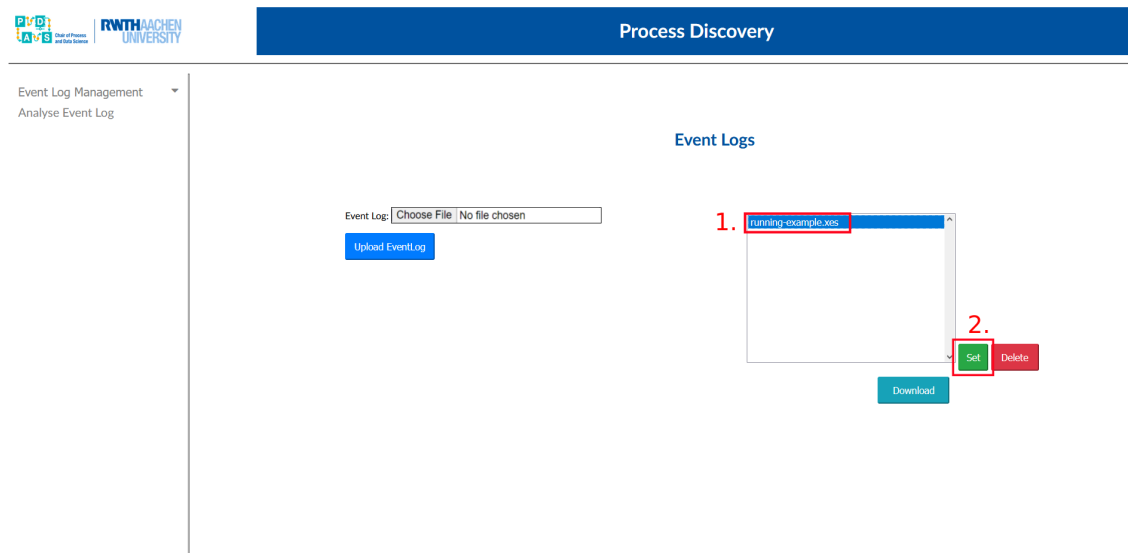
Event Log: Choose File No file chosen
5. Upload EventLog

Set
Delete

Download

4 Set Event log

1. Press the Event log you want to select
2. Press **Set**
3. Press the name of the column in the event log corresponding to the Case ID Attribute
4. Repeat for the **Activity**, **Resource**, **Timestamp** and **Lifecycle Attribute**
5. Press **Save**



Resource
Costs

4. Resource
Costs

Choose the Timestamp Attribute:

conceptname
org:resource
4. time:timestamp
Activity
Resource

Choose the Lifecycle Attribute:

4. NO LIFECYCLE ATTRIBUTE IN LOG
conceptname
org:resource
time:timestamp
Activity

5. Save

5 Derive Attributes

1. Select an event log of choice (see section 4) if not already set
2. Press **Derive Attributes** listed under **Event Log Management**
3. Chose the derived attribute by pressing the filter category and then the filter (multiple filter possible)
4. Press **Update Event Log**
5. The augmented event log can now be found in the **Import File** section

The screenshot displays the 'Process Discovery' interface. On the left, the 'Event Log Management' menu is expanded, with 'Derive Attributes' highlighted and labeled with a red '2.'. The main area is titled 'Chose which attributs you want to derive:'. Under the 'Time' category, 'Activity duration of completed activities' is selected and labeled with a red '3.'. To the right, the 'Attributes to derive:' section shows a box containing 'Activity duration of completed activities(T1)'. At the bottom right, the 'Update Event Log' button is highlighted with a red box and labeled with a red '4.'.

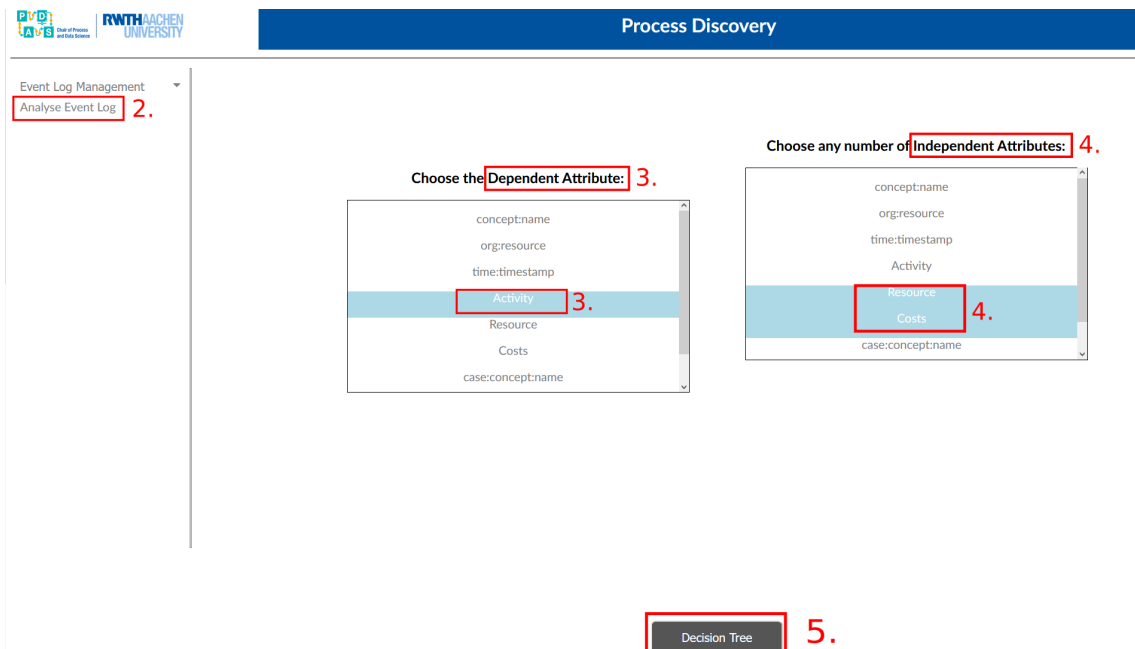
6 Filter Event Log

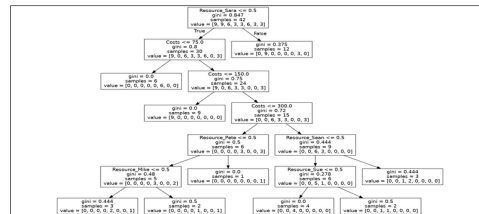
1. Select an event log of choice (see section 4) if not already set
2. Press **Filter Event log** listed under **Event Log Management** in the left corner.
3. Chose the filter option by pressing the filter of choice
4. Press **Filter Event Log**
5. The filtered event log can now be found in the **Import File** section

The screenshot displays the 'Process Discovery' application interface. On the left, a sidebar menu under 'Event Log Management' includes options like 'Import File', 'Derive Attributes', 'Filter Event Log' (highlighted with a red box and labeled '2.'), and 'Analyse Event Log'. The main area is titled 'Chose how to filter your event log:' and contains a list of filter options: 'Keep All Events(F1)', 'Only Keep First Event Of A Case(F2)' (highlighted with a red box and labeled '3.'), 'Only Keep Last Event Of A Case(F3)', 'Only Keep "Complete" Events(F4)', 'Only Keep "Start" Events(F5)', 'Only Keep Events With A Certain Activity(F6)', and 'Only Keep Events With A Certain Resource(F7)'. At the bottom of this list, a 'Filter Event Log' button is highlighted with a red box and labeled '4.'

7 Use Case Analyses

1. Select an event log of choice (see section 4) if not already set
2. Press **Analyse Event Log**
3. Choose the target variable by selection it under **Dependent Attribute**
4. Choose the feature variables by selection them under **Independent Attributes**
5. Press **Decision Tree**
6. You can now see the decision tree. Press **Clustering** to continue
7. To see the different process models press **Process Model**
8. Shuffle between the process models by press **Back** or **Next**
9. The decision tree, the process model and the clusters can now all be found in the **Import File** section



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Clustering

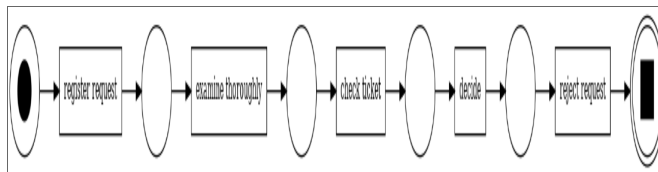
6.

Clustering completed, you can proceed to Process Mining!!!

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Process Model

17.



[Back](#)

8.

[Back to Use Case](#)

8.

Next

8 Download Event Log

1. Press **Import File** listed under **Event Log Management**
2. Select the event log you want to download
3. Press **Download**

