

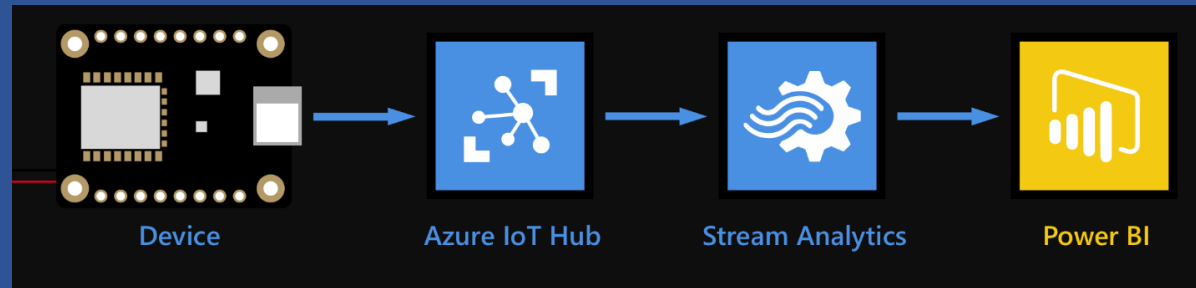
Real-time visualization



Streaming real-time data



Work steps



1. Run the Stream Analytics Job
2. Verify that the Streaming Job
3. Create visualize
4. Add Report
5. Create line chart
6. Pin visualize to dashboard
7. Change dashboard's theme

Run the Stream Analytics job

Click Start / Now / Start

The screenshot shows the Azure Stream Analytics job configuration interface. It includes a top bar with 'Start', 'Stop', and 'Delete' buttons. The main section displays job details: Status (Created), Location (Southeast Asia), Subscription (Loy2019a), and Subscription ID (3bcd7cd7-81ed-48e6-ad0f-d1d2258efcd9). Below this are the Inputs and Outputs sections, each showing 1 input/output connected to IoT Hub and Blob storage respectively. The Monitoring section at the bottom shows a progress bar. Red arrows highlight the 'Start' button in the top bar, the 'Now' option for 'Job output start time', and the 'Start' button at the bottom right.

Start Stop Delete

Status
Created

Location
Southeast Asia

Subscription (change)
Loy2019a

Subscription ID
3bcd7cd7-81ed-48e6-ad0f-d1d2258efcd9

Inputs
1
loy-sa-input1 IoT Hub

Outputs
1
loy-output1 Blob storage

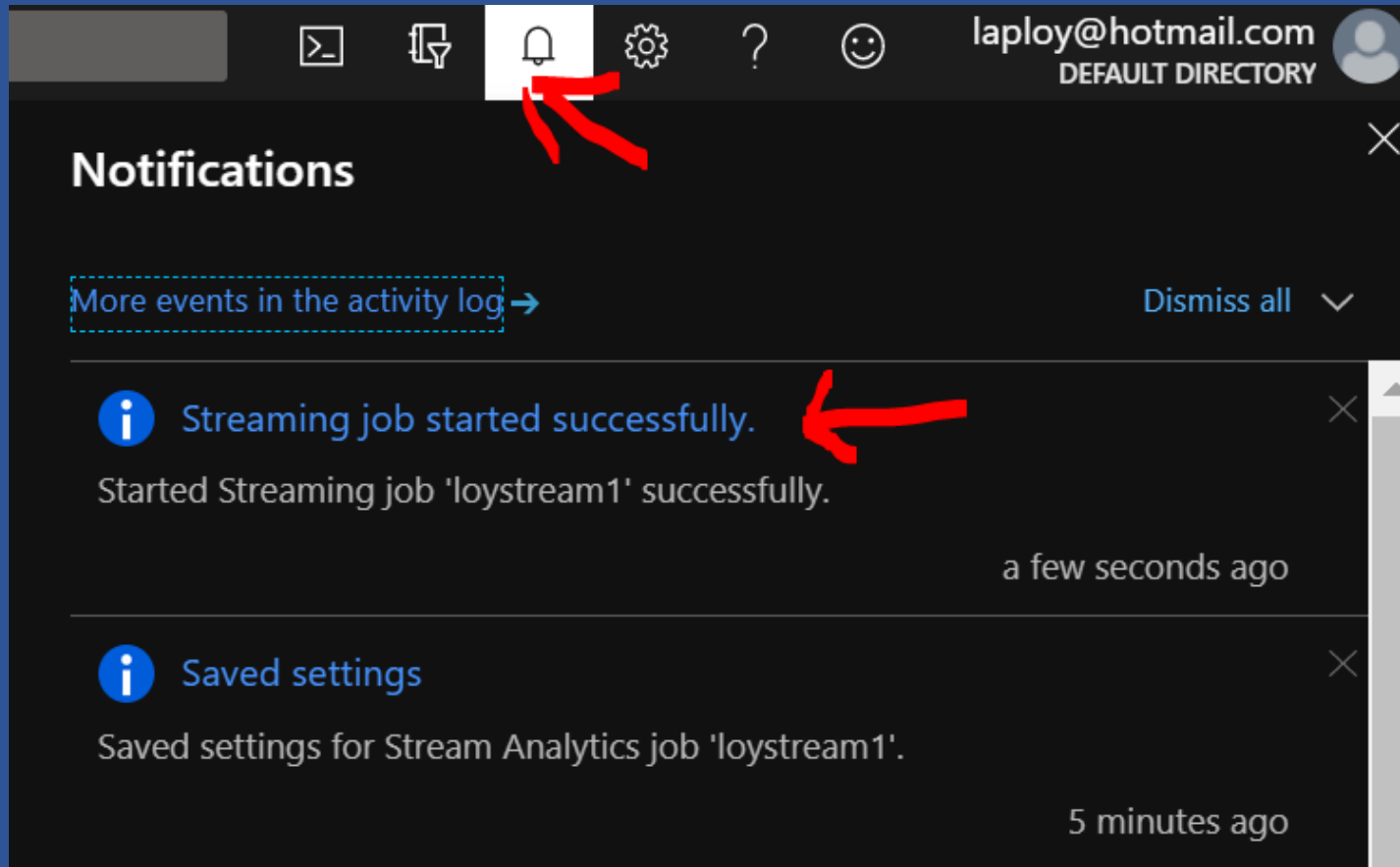
Monitoring
100

Job output start time ⓘ
Now Custom When last stopped

This job will start with 3 streaming units. You can change units under Scale.

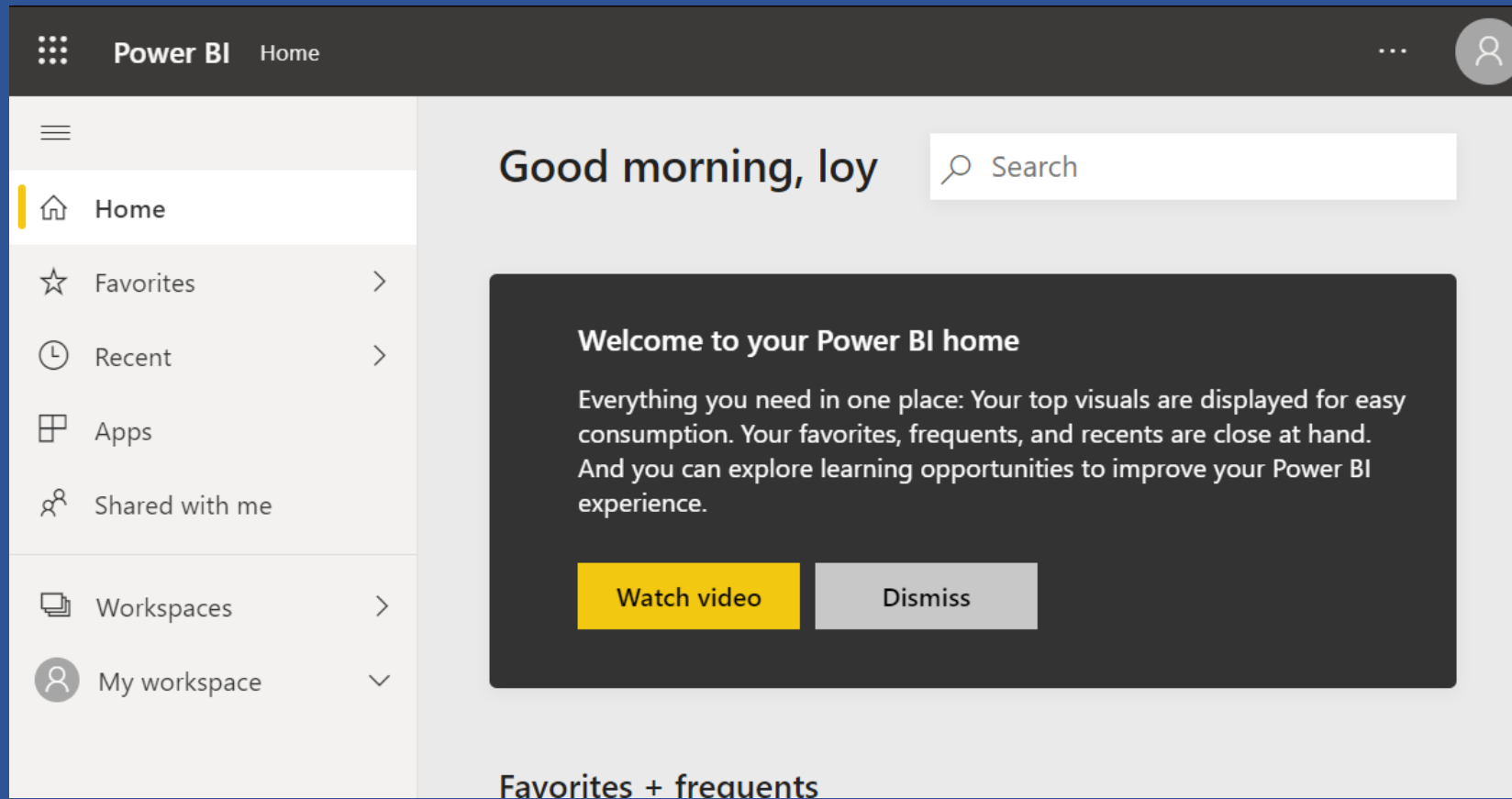
Start

Verify that the Streaming Job is started successfully



Create visualize

Login to Power BI home page



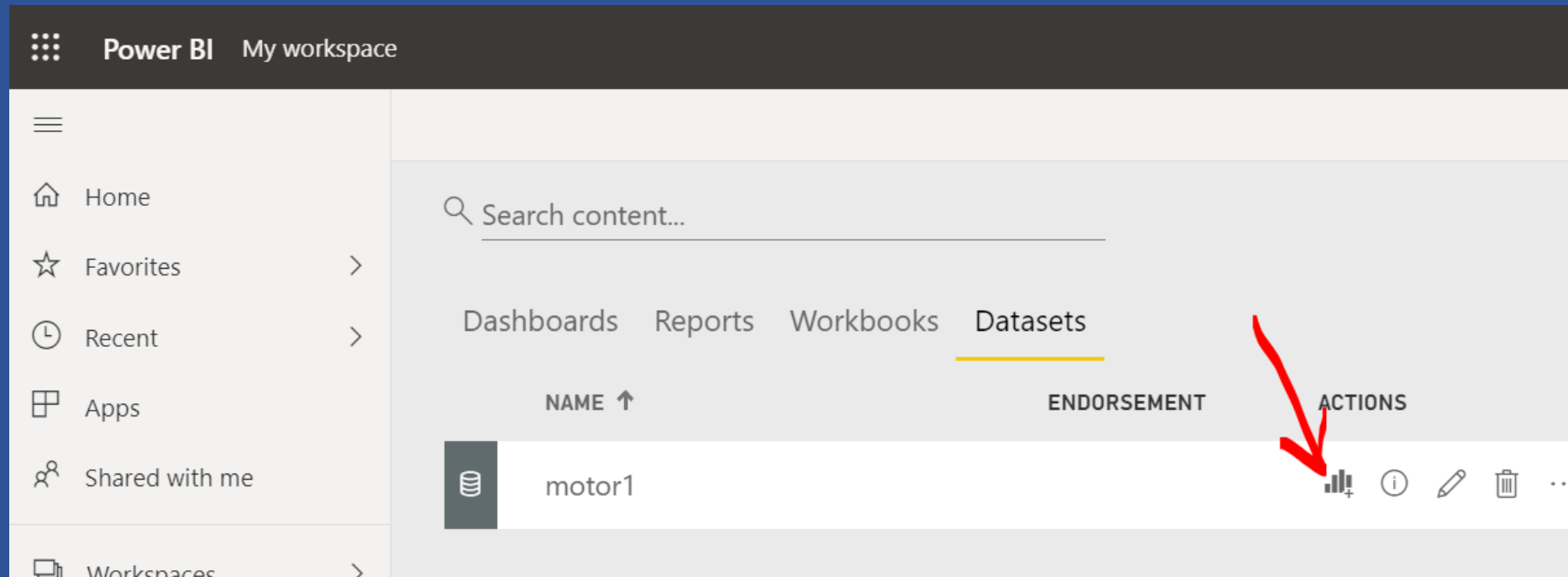
Click My workspace / Datasets

you should see motor1 if not, send some message from Sim

The screenshot shows a web application interface. On the left is a sidebar with a menu. The main content area on the right has a search bar and a tabbed interface with 'Dashboards', 'Reports', 'Workbooks', and 'Datasets'. The 'Datasets' tab is selected and underlined. Below the tabs is a table with two columns: 'NAME' and 'ENDORSEMENT'. A single row is visible with the name 'motor1'.

NAME	ENDORSEMENT
motor1	

Click Add Report



Create line chart to show real-time speed

1. On the Visualizations pane of the report creation page, select the line chart icon to add a line chart.
2. On the Fields pane, expand the table that you specified when you created the output for the Stream Analytics job.
3. Drag **EventEnqueuedUtcTime** to Axis on the Visualizations pane.
4. Drag **motor_speed** temperature to Values.

The screenshot shows the report creation interface with two main panes: Visualizations and Fields.

Visualizations Pane:

- The top section displays various chart icons. A red arrow points to the line chart icon.
- The bottom section shows the configuration for the selected visualization. It includes:
 - Axis:** A dropdown menu showing 'EventEnqueuedUtcTime' with a red arrow pointing to it.
 - Legend:** A section with the text 'Add data fields here'.
 - Values:** A dropdown menu showing 'Count of motor_speed' with a red arrow pointing to it.

Fields Pane:

- The top section has a search bar.
- The bottom section lists the fields for the table 'loytable1'. The fields are:
 - ambient
 - coolant
 - EventEnqueuedUtcTime (checked with a red arrow pointing to it)
 - EventProcessedUtcTime
 - i_d
 - i_q
 - IoTHub
 - motor_speed (checked with a red arrow pointing to it)
 - PartitionId
 - pm
 - stator_tooth
 - stator_winding
 - stator_yoke

Value / Average

The screenshot shows a data visualization tool interface with the following sections:

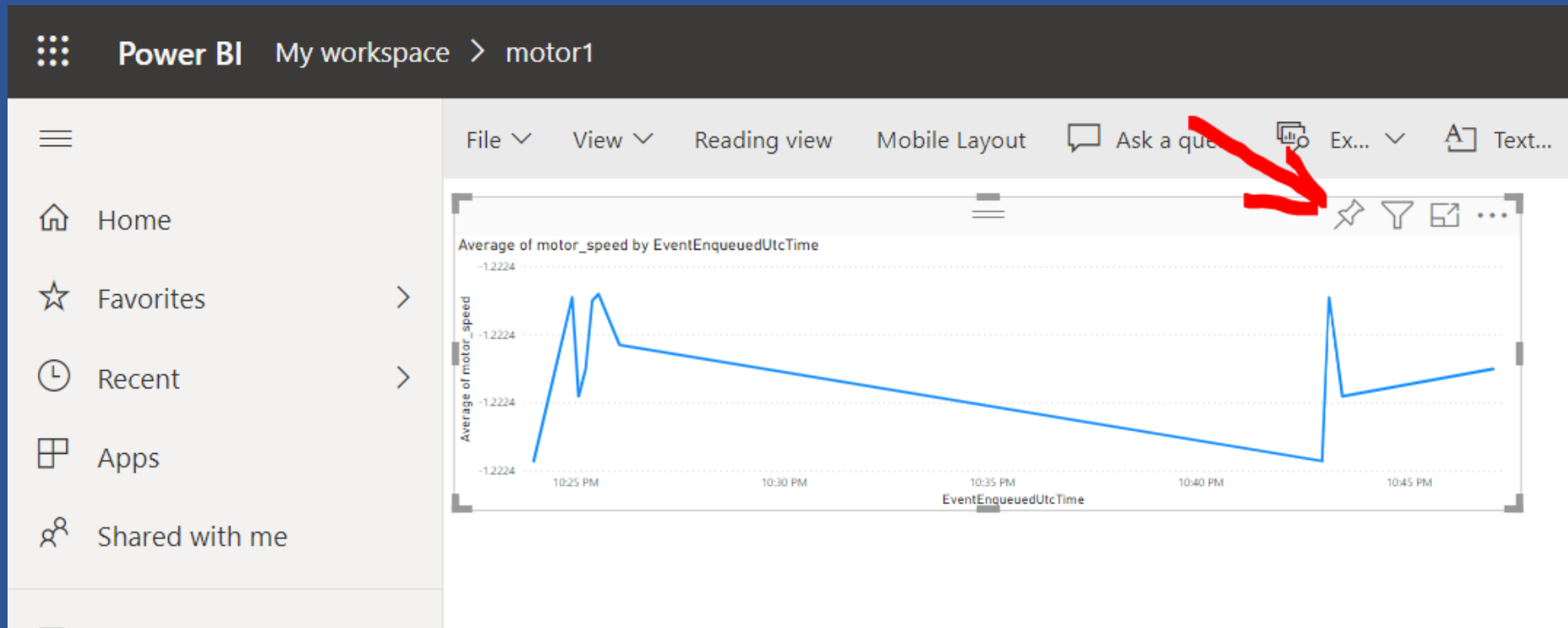
- Axis:** EventEnqueuedUtcTime
- Legend:** Add data fields here
- Values:** Average of motor_speed
- Tooltips:** (empty)

A red arrow points from the 'Values' section to the 'Average' option in the context menu. The context menu also shows 'Sum', 'Minimum', 'Maximum', 'Count (Distinct)', and 'Count'.

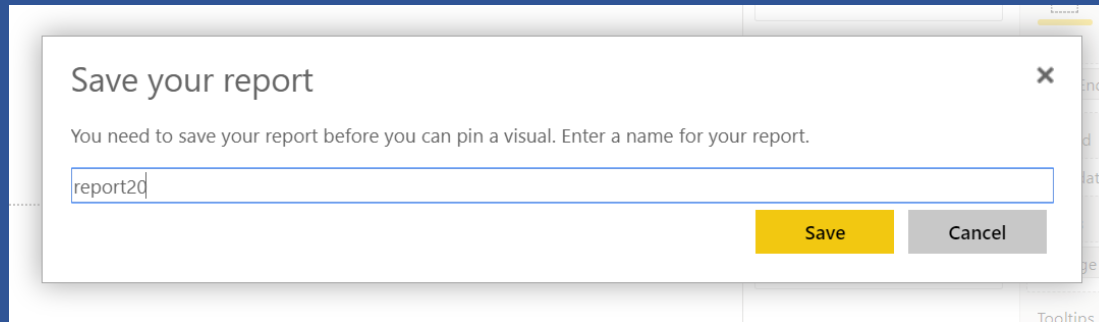
On the right side, a list of fields is shown with checkboxes and aggregation symbols:

- ☐ EventProcess...
- ☐ Σ i_d
- ☐ Σ i_q
- ☐ IoTHub
- ☒ Σ motor_speed
- ☐ Σ PartitionId
- ☐ Σ pm
- ☐ Σ stator_tooth
- ☐ Σ stator_winding

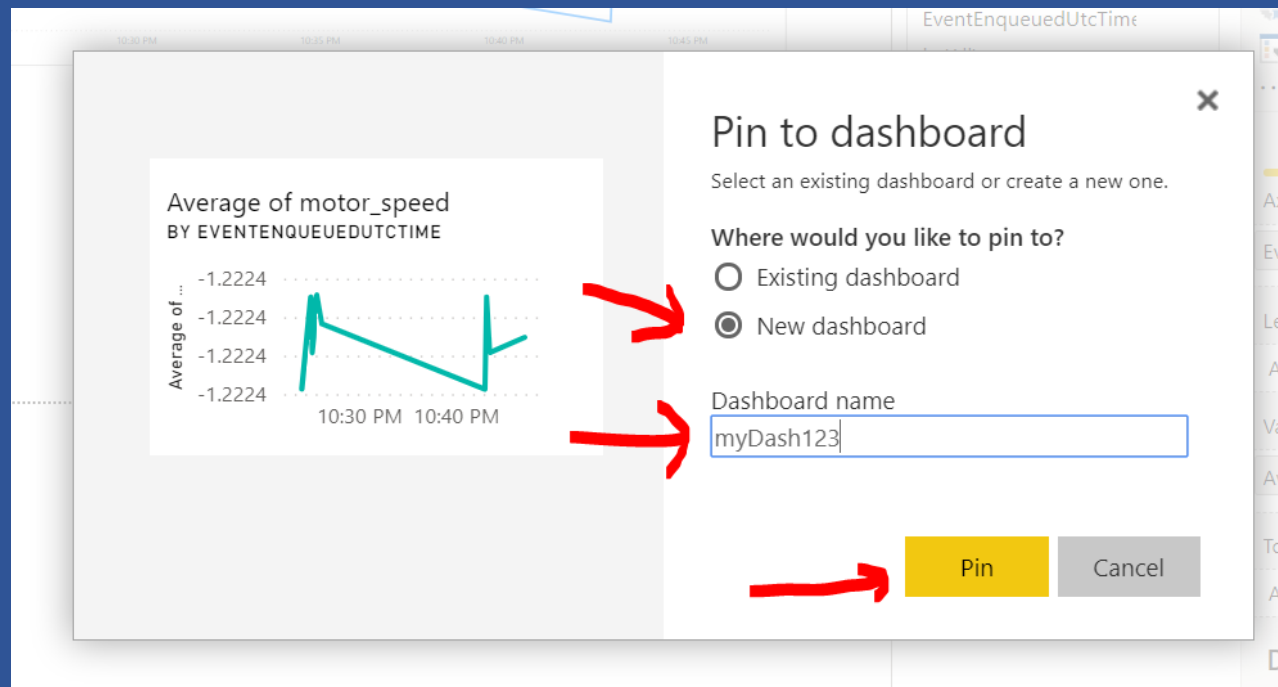
Pin visualize to dashboard



Save your report / Pin to dashboard



A dialog box titled "Save your report" with a close button (X) in the top right corner. The text inside says: "You need to save your report before you can pin a visual. Enter a name for your report." Below this text is a text input field containing the text "report20". At the bottom right are two buttons: "Save" (yellow) and "Cancel" (gray).

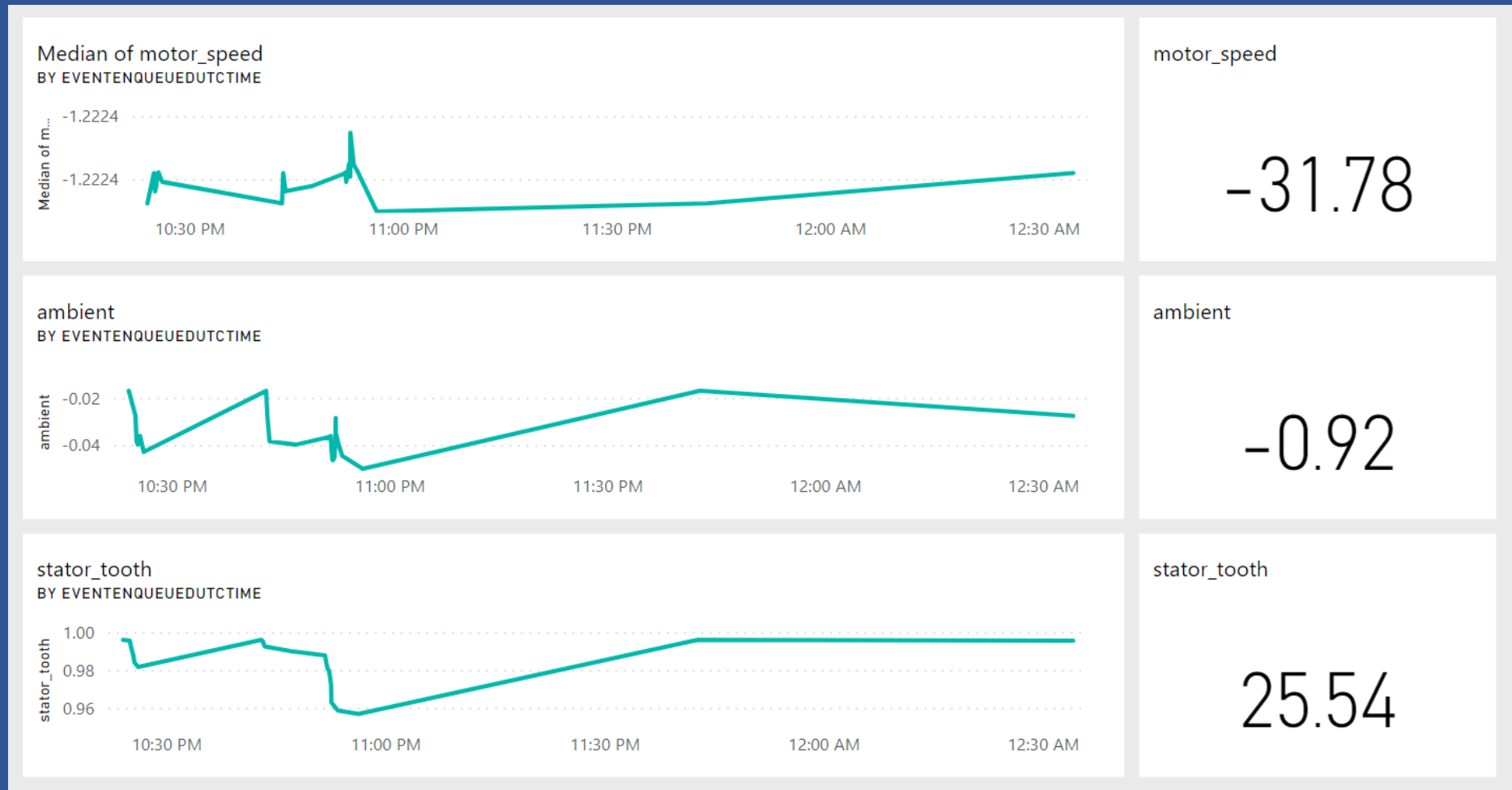


A dialog box titled "Pin to dashboard" with a close button (X) in the top right corner. The text inside says: "Select an existing dashboard or create a new one." Below this is a section titled "Where would you like to pin to?" with two radio button options: "Existing dashboard" and "New dashboard". The "New dashboard" option is selected. Below this is a text input field labeled "Dashboard name" containing the text "myDash123". At the bottom right are two buttons: "Pin" (yellow) and "Cancel" (gray). Red arrows point from the chart area on the left to the "New dashboard" radio button and the "Dashboard name" input field, and another red arrow points to the "Pin" button.

Average of motor_speed
BY EVENTENQUEUEDUTCTIME

Time	Average of motor_speed
10:30 PM	-1.2224
10:35 PM	-1.2224
10:40 PM	-1.2224

Edit Report / Add more line chart and Card / Pin each one to dashboard



Change dashboard's theme to dark

The screenshot shows a dashboard with a top navigation bar containing links for Export, Share, Subscribe, Comments, and Favorite. A red arrow points to a three-dot menu icon in the top right corner. A dropdown menu is open, listing several options: Add tile, Save a copy, Set as featured, View related, Performance inspector, Mobile view, Refresh, Dashboard theme, and Settings. A second red arrow points to the 'Dashboard theme' option. Below the navigation bar, there is a search bar labeled 'Ask a question about your data'. The main content area displays two line charts. The first chart is titled 'Median of motor_speed BY EVENTENQUEUEDUTCTIME' and shows a line graph with a y-axis labeled 'Median of m...' and values -1.2224 and -1.2224. The x-axis shows time points 10:30 PM, 11:00 PM, and 11:30 PM. The second chart is titled 'ambient BY EVENTENQUEUEDUTCTIME' and shows a line graph with a y-axis labeled 'bient' and a value -0.02. The x-axis shows time points 10:30 PM, 11:00 PM, and 11:30 PM.

What's next?

