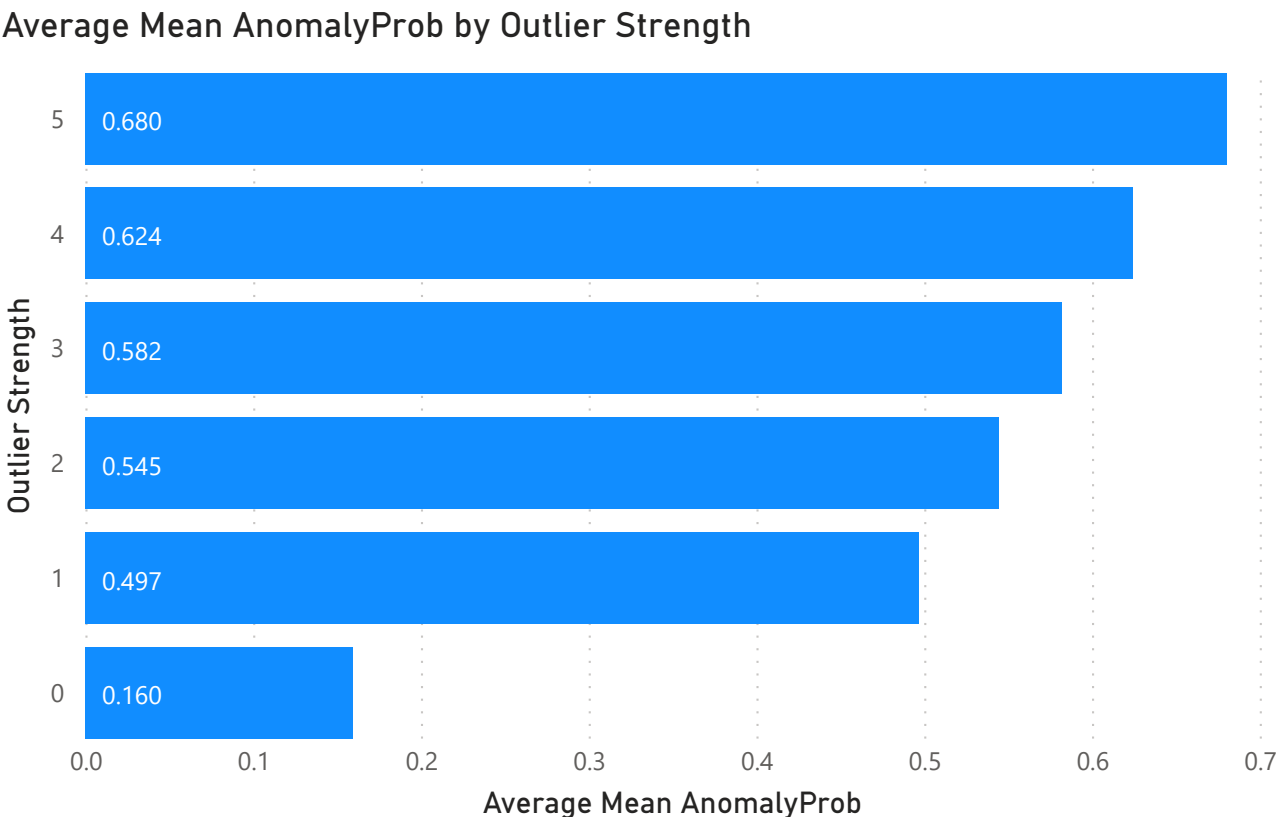
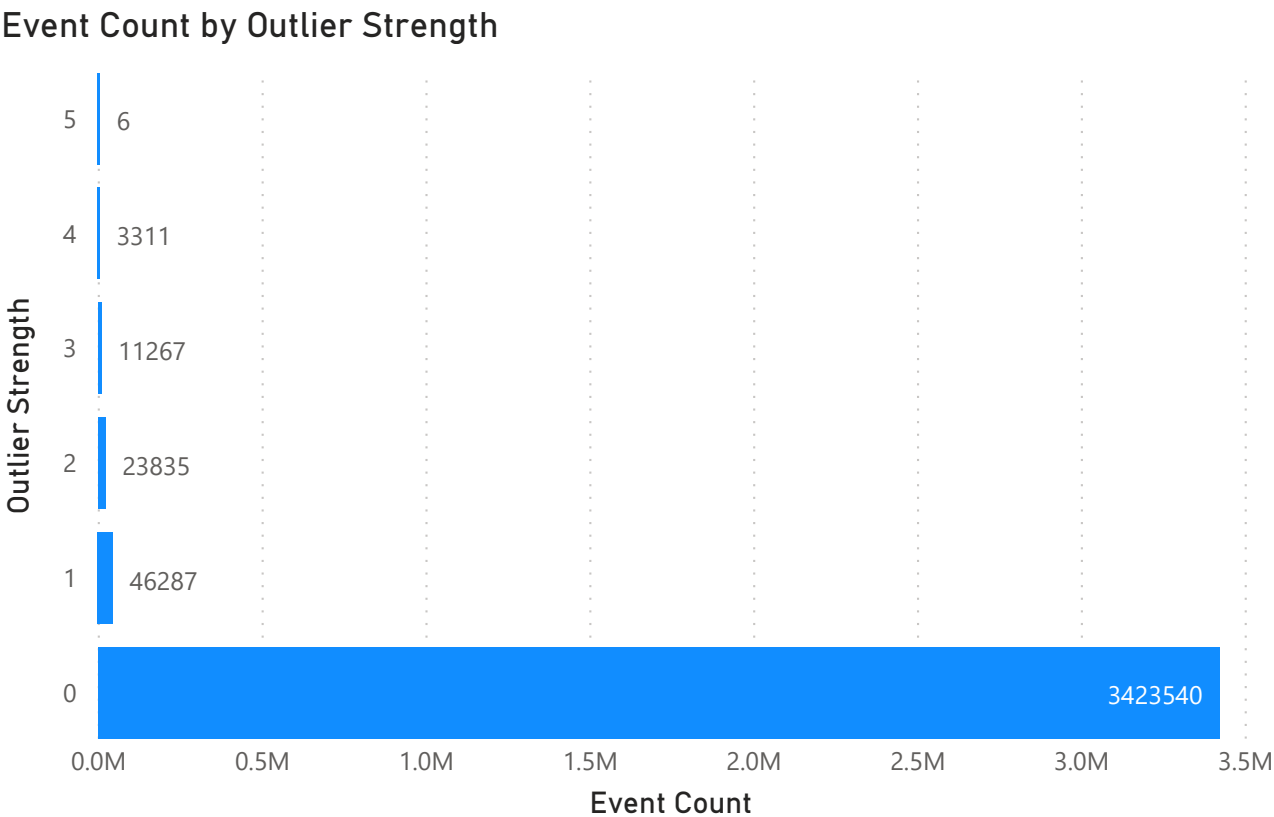


IAMS General Purpose Anomaly Detection Development (ATS)

General Overview 1



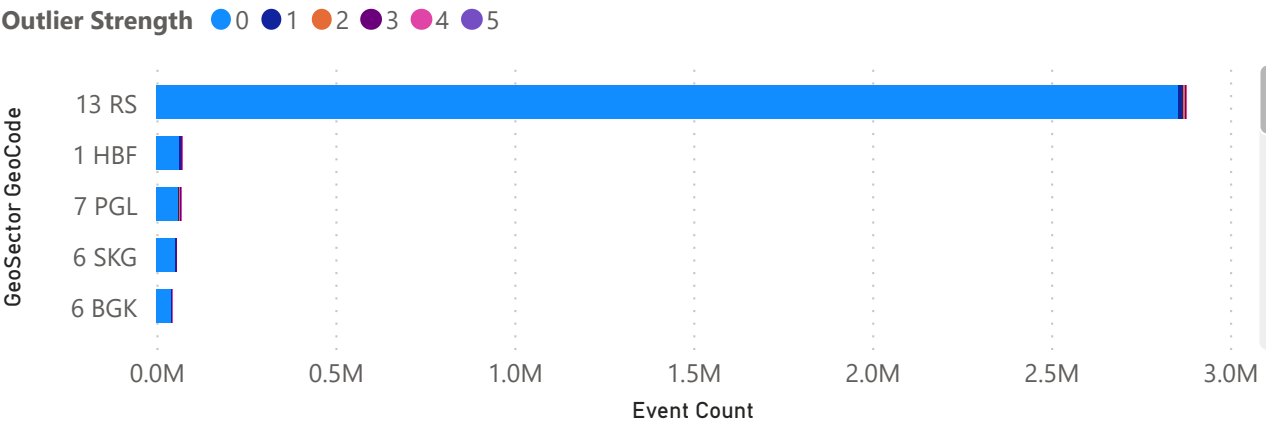
Slicer Pane (Show)

Top Outlier Count by Outlier Strength	Outlier Count by CBLOF	Outlier Count by PCA	Outlier Count by HBOS	Outlier Count by Isolation Forest	Outlier Count by LODA
3317	35.08K	703	35.08K	35.08K	35.08K
Top Outlier Av. Anomaly Prob.	Outlier Av. Anomaly Prob. by CBLOF	Outlier Av. Anomaly Prob. by PCA	Outlier Av. Anomaly Prob. by HBOS	Outlier Av. Anomaly Prob. by Isolation Forest	Outlier Av. Anomaly Prob. by LODA
0.624...	0.79	0.56	0.80	0.56	0.73

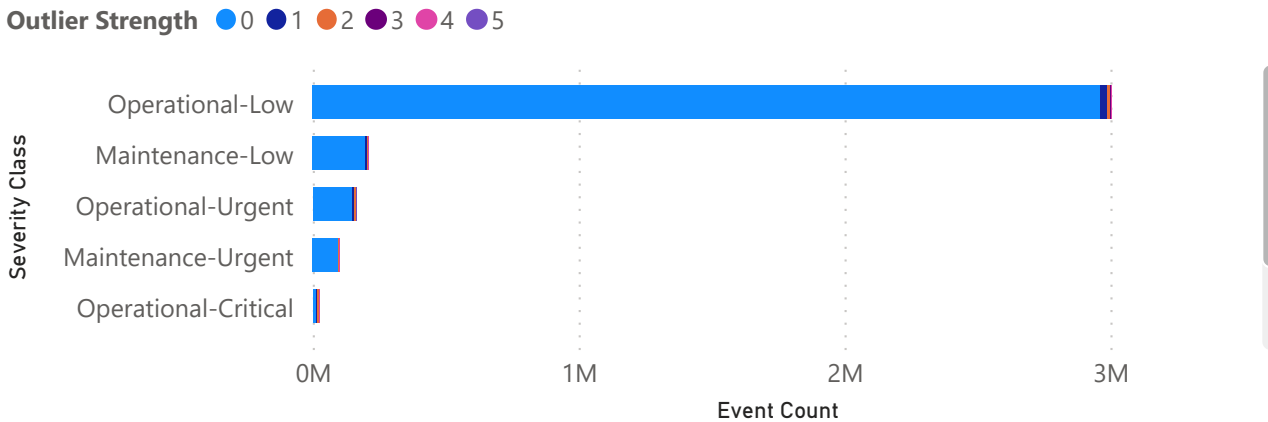
IAMS General Purpose Anomaly Detection Development (ATS)

General Overview 2

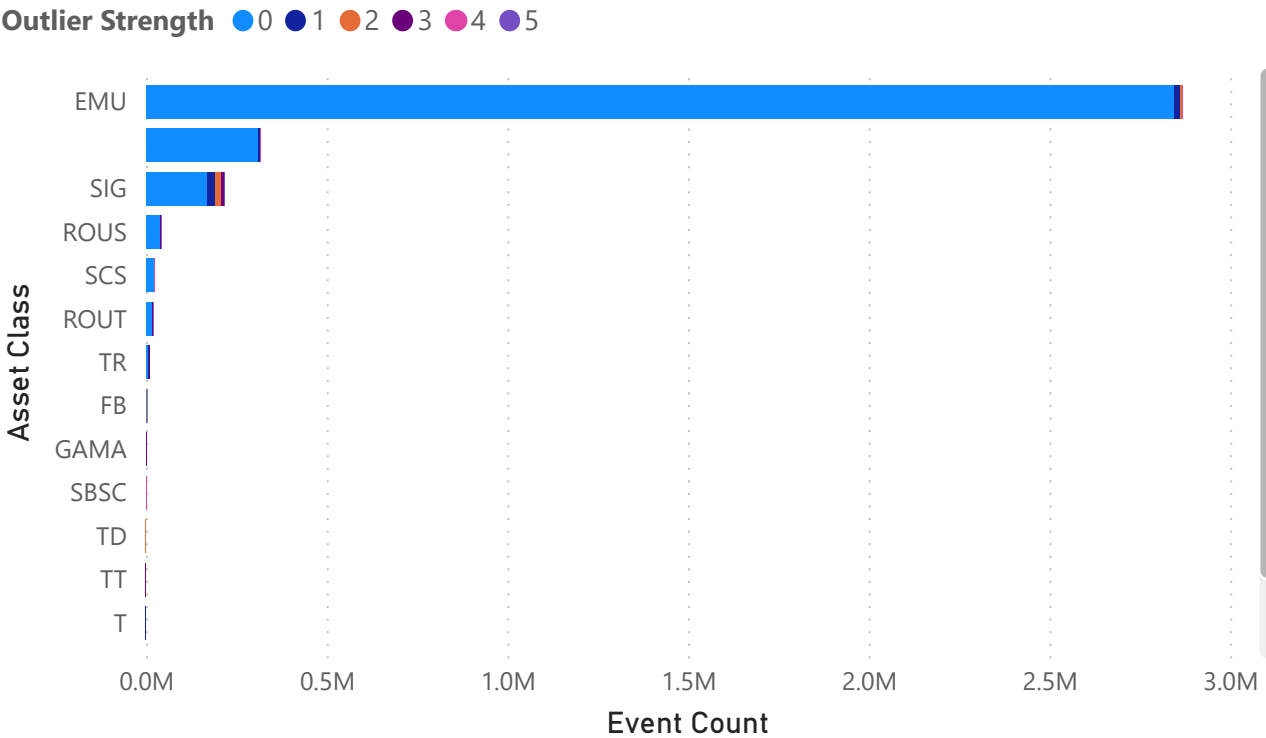
Event Count by GeoSector, GeoCode and Outlier Strength



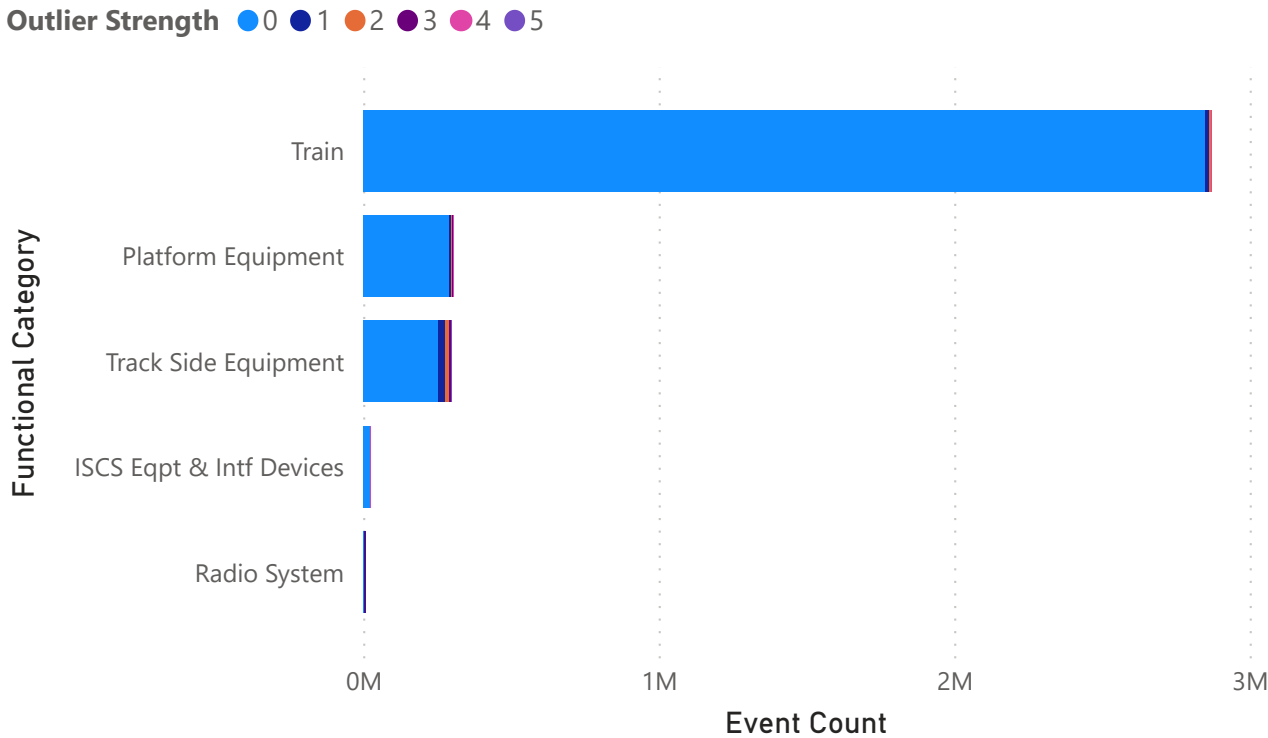
Event Count by Severity Class and Outlier Strength



Event Count by Asset Class and Outlier Strength



Event Count by Functional Category and Outlier Strength



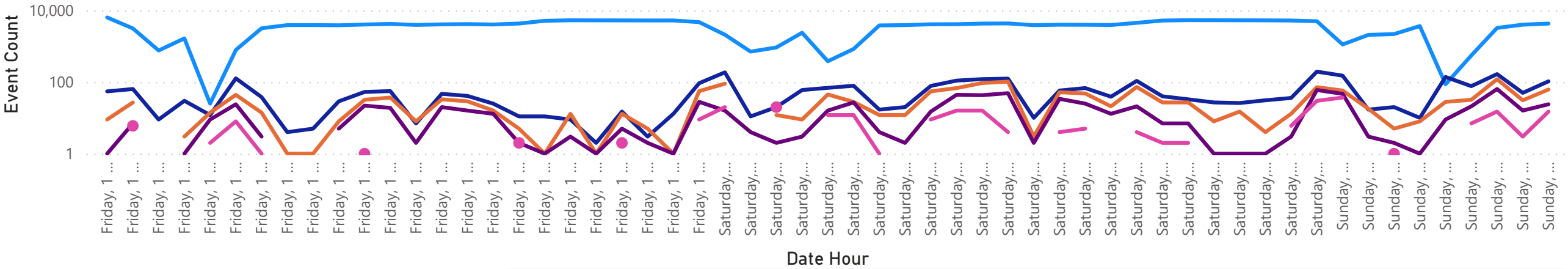
Slicer Pane (Show)

IAMS General Purpose Anomaly Detection Development (ATS)

Timeline 1

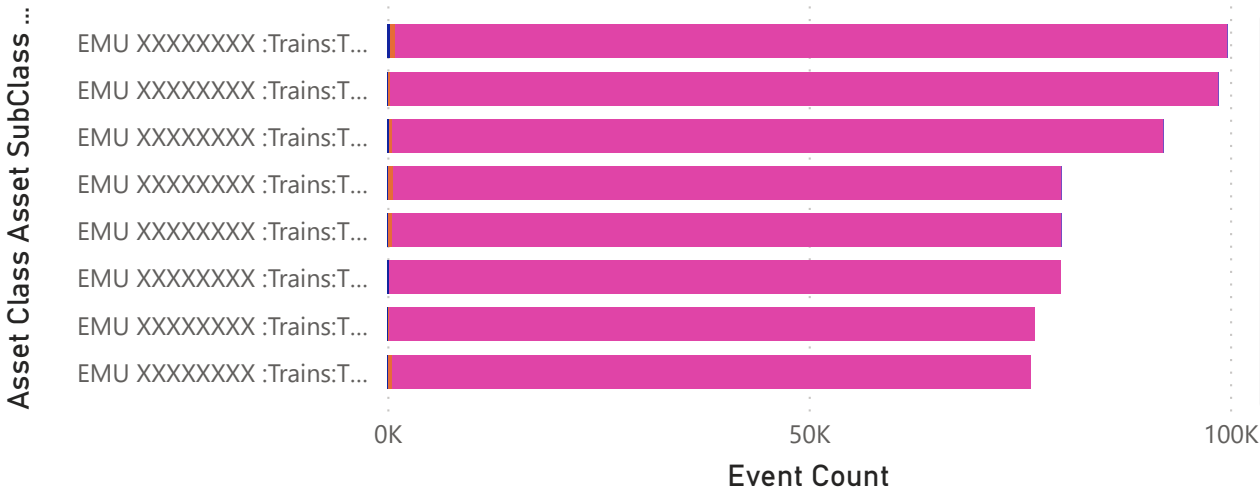
Event Count by Date, Hour and Outlier Strength

Outlier Strength 0 1 2 3 4 5



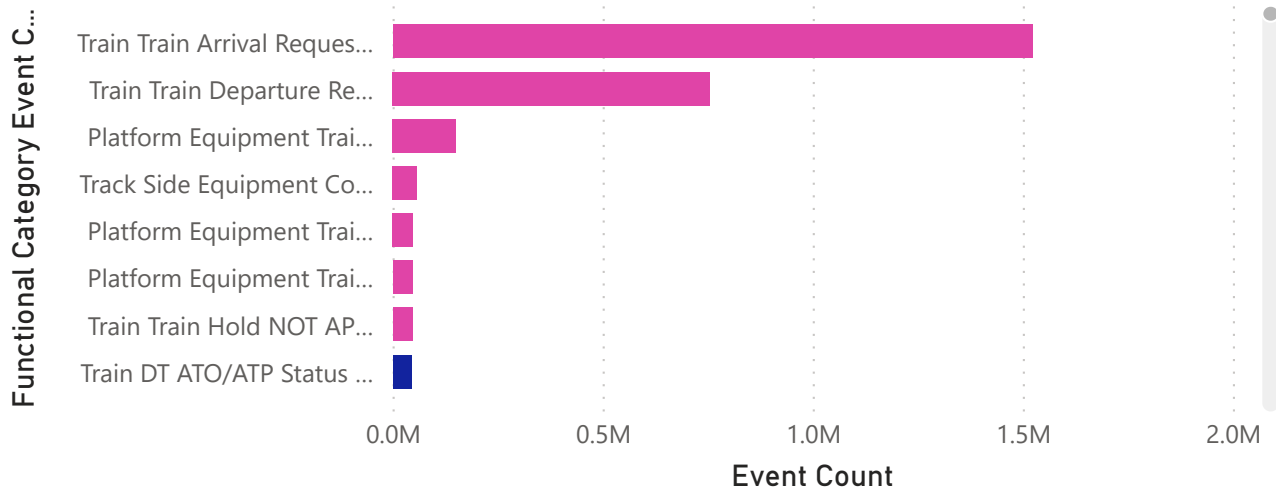
Event Count by Asset Class, Asset SubClass, Equipment Name and Severity Class

Severity Class Mainten... Mainten... Mainten... Operati... Operati... Operati... Others



Event Count by Functional Category, Event Category, Event Staus and Severity Class

Severity Class Mainten... Mainten... Mainten... Operati... Operati... Operati... Others



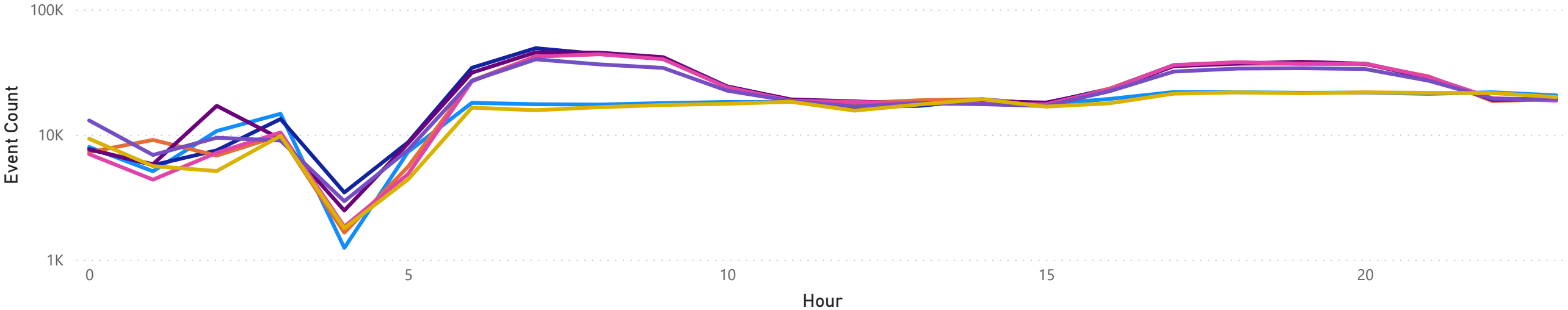
Slicer Pane (Show)

IAMS General Purpose Anomaly Detection Development (ATS)

Timeline 2

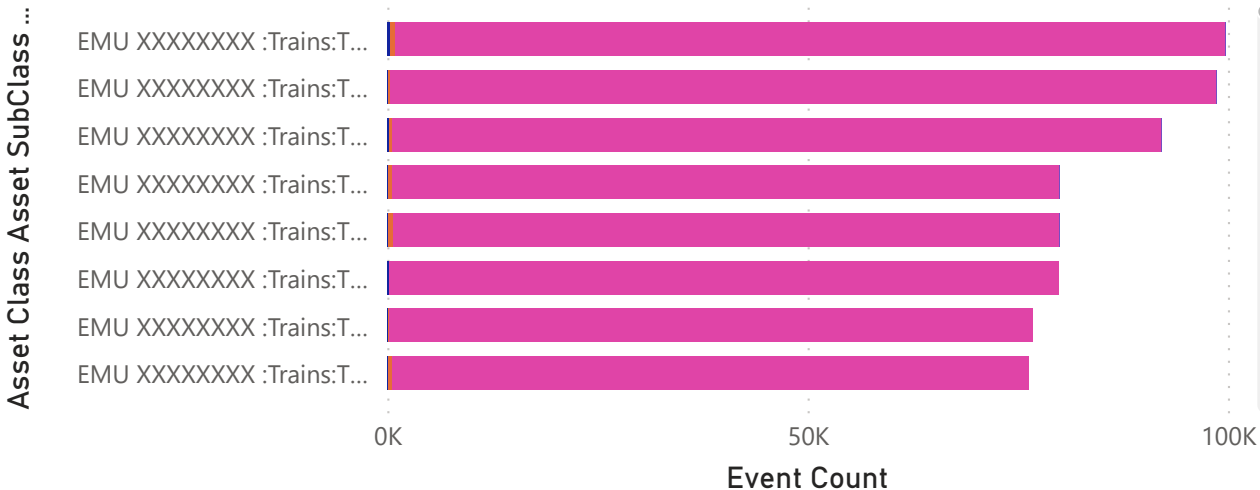
Event Count by Hour and Day of Week

Day of Week 0 1 2 3 4 5 6



Event Count by Asset Class, Asset SubClass, Equipment Name and Severity Class

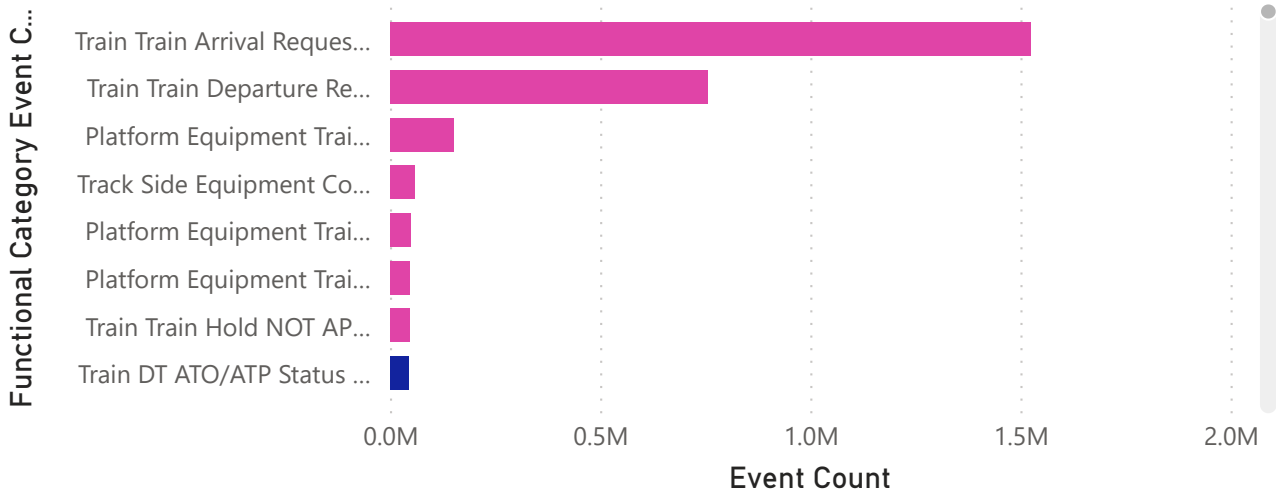
Severity Class Mainten... Mainten... Mainten... Operati... Operati... Operati... Others



Hour

Event Count by Functional Category, Event Category, Event Staus and Severity Class

Severity Class Mainten... Mainten... Mainten... Operati... Operati... Operati... Others



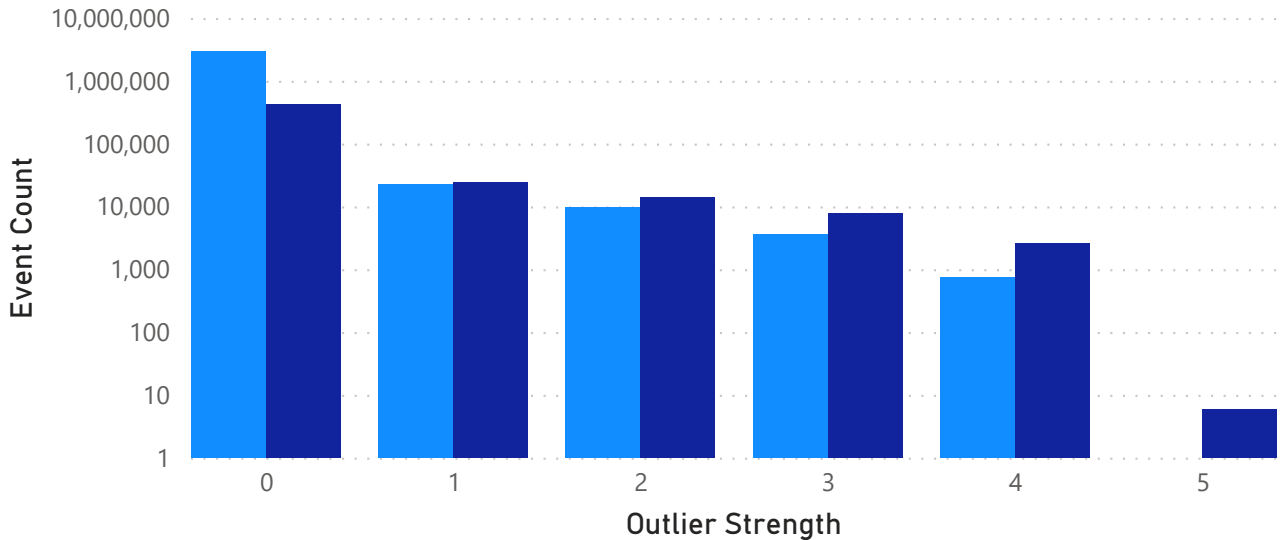
Slicer Pane (Show)

IAMS General Purpose Anomaly Detection Development (ATS)

Event Attributes

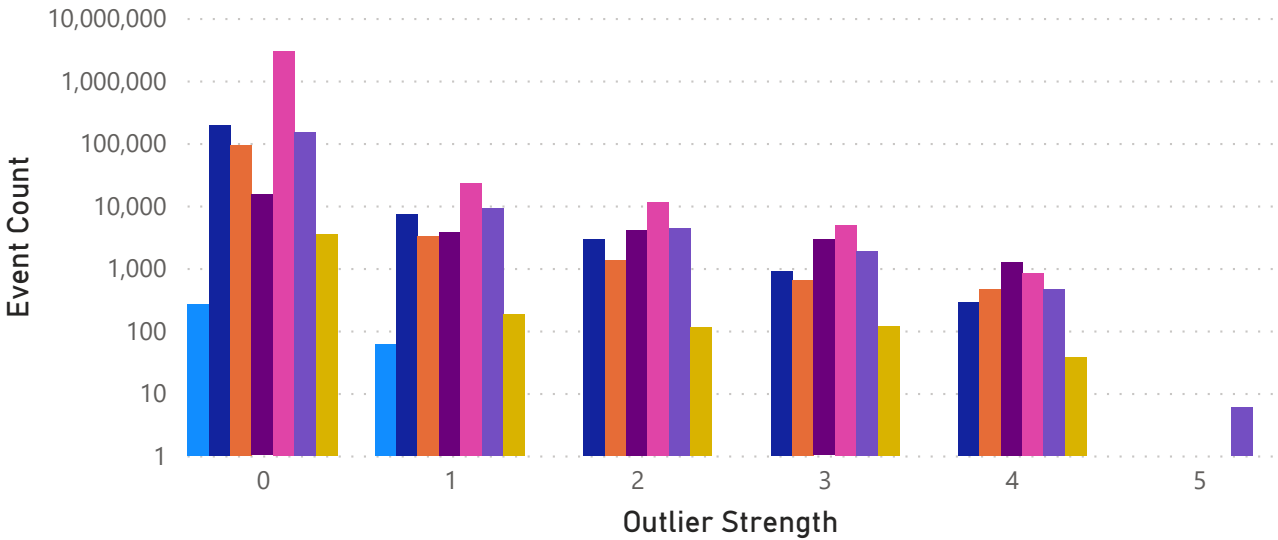
Event Count by Outlier Strength and isAlarm

isAlarm ● False ● True



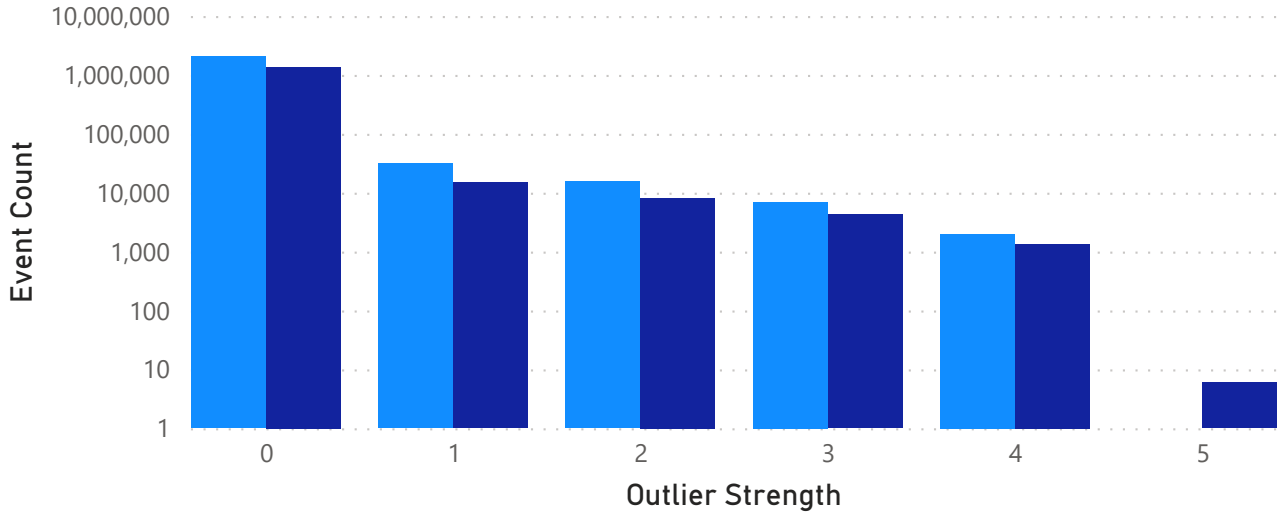
Event Count by Outlier Strength and Severity Class

Severity Class ● Mainten... ● Mainten... ● Mainten... ● Operati... ● Operati... ● Operati... ● Others



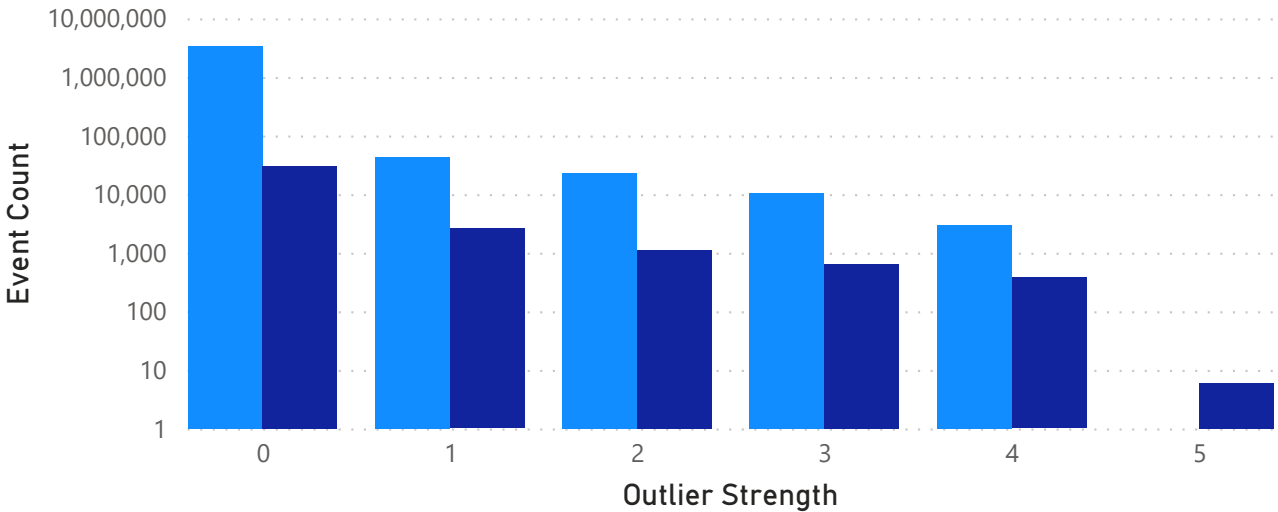
Event Count by Outlier Strength and Nuisance Event

Nuisance Event ● False ● True



Event Count by Outlier Strength and CrashWarning

CrashWarning ● False ● True

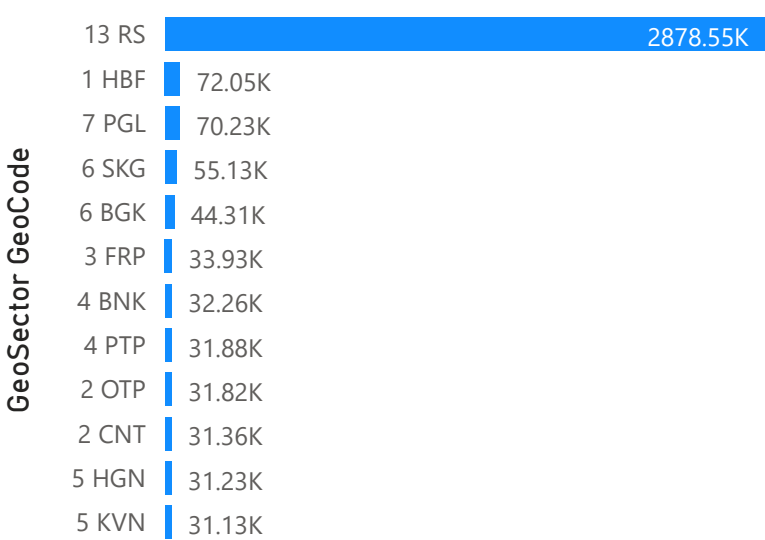


Slicer Pane (Show)

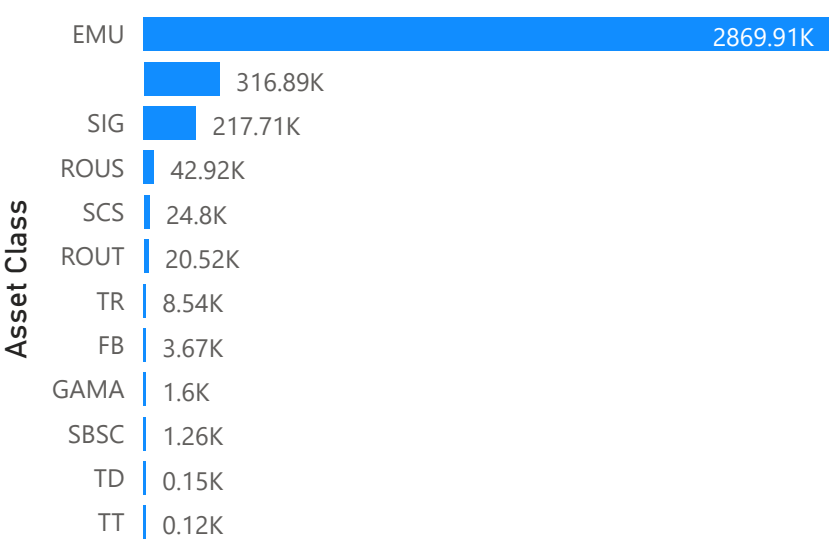
IAMS General Purpose Anomaly Detection Development (ATS)

Event Details

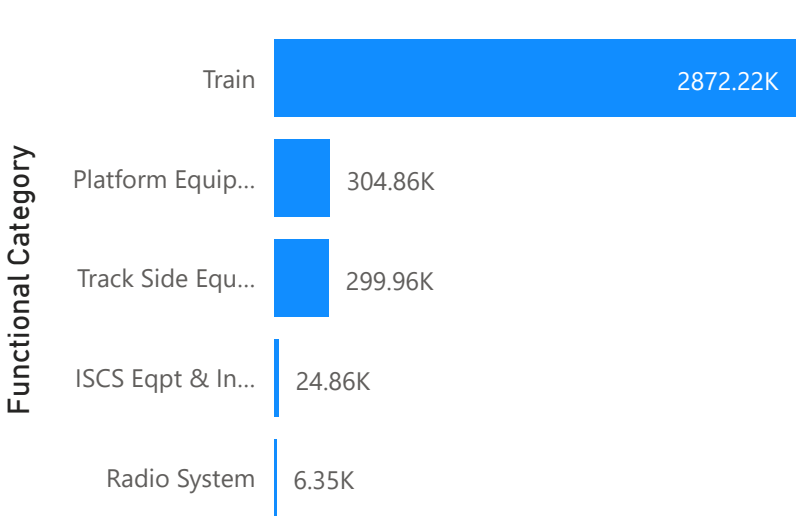
Event Count by GeoSector and GeoCode



Event Count by Asset Class



Event Count by Functional Category



Event Count		Event Count		Event Count		Event Count		Event Count	
SCS_TIME	GeoSector	GeoCode	AssetClass	AssetSubClass	EQUIPMENT_NAME	ASSET_ID_RAW	Functional Category	EVENT_DESC_CAT	
2021-01-24 02:49:13.303142144	24	BGK	SIG	DMS	:BGK:TRAS:DMS_0001:ADCF_0003	SIG/BGK/B2/DMS0301	Track Side Equipment	Local-Adjacent Link Status	
2021-01-27 01:34:46.806466048	14	PGL	SCS	RTU	:PGL:BMF:PMSB_0002:RTUB_0022	SCS/PGL/B1/RTU22	ISCS Eqpt & Intf Devices	Primary/Standby State	
2021-01-27 01:34:50.348576000	14	PGL	SCS	RTU	:PGL:BMF:PMSB_0002:RTUB_0022	SCS/PGL/B1/RTU22	ISCS Eqpt & Intf Devices	Primary/Standby State	
2021-01-27 01:34:53.879528960	14	PGL	SCS	RTU	:PGL:BMF:PMSB_0002:RTUB_0022	SCS/PGL/B1/RTU22	ISCS Eqpt & Intf Devices	Primary/Standby State	
2021-01-27 01:34:57.407635968	14	PGL	SCS	RTU	:PGL:BMF:PMSB_0002:RTUB_0022	SCS/PGL/B1/RTU22	ISCS Eqpt & Intf Devices	Primary/Standby State	
2021-01-27 01:35:00.935493888	14	PGL	SCS	RTU	:PGL:BMF:PMSB_0002:RTUB_0022	SCS/PGL/B1/RTU22	ISCS Eqpt & Intf Devices	Primary/Standby State	
2021-01-12 02:16:37.106828800	4	CNT			:CNT:TRAS:PTFM_0001	CNT_PTFM_0001	Platform Equipment	PSD Service Status	
2021-01-12 02:16:45.947508992	4	CNT			:CNT:TRAS:PTFM_0001	CNT_PTFM_0001	Platform Equipment	PSD Service Status	
2021-01-12 02:17:22.533613056	4	CNT			:CNT:TRAS:PTFM_0001	CNT_PTFM_0001	Platform Equipment	PSD Service Status	
2021-01-12 02:17:47.517100032	4	CNT			:CNT:TRAS:PTFM_0001	CNT_PTFM_0001	Platform Equipment	PSD Service Status	
2021-01-12 02:18:08.206688000	4	CNT			:CNT:TRAS:PTFM_0001	CNT_PTFM_0001	Platform Equipment	PSD Service Status	
Total		40074780							

Slicer Pane (Show)

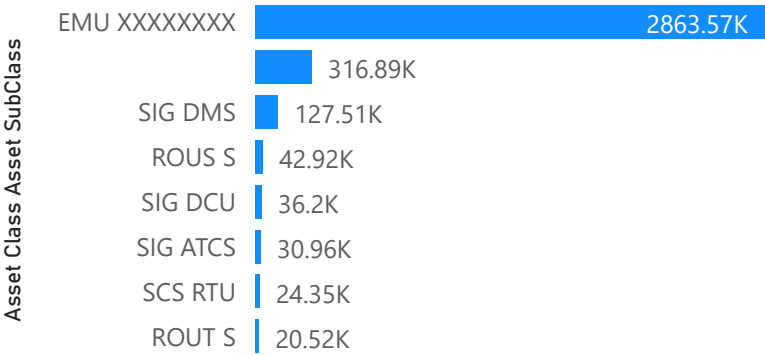
IAMS General Purpose Anomaly Detection Development (ATS)

Event Combo

Event Attribute Filter (N-0)

- ☐ Access Mgmt System
- ☐ CCTV System
- ☐ Depot OCS (Traction)

Event Count by Asset Class and Asset SubClass

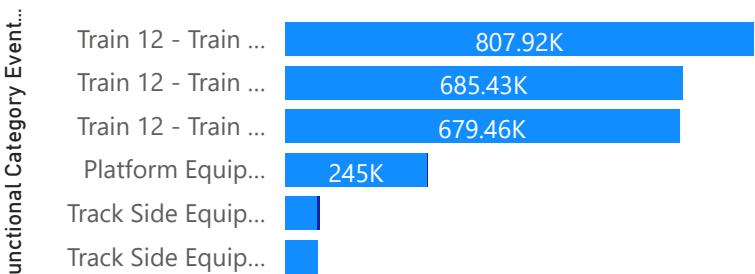


Event Attribute Filter (N-1)

- ☐ Access Mgmt System
- ☐ CCTV System
- ☐ Depot OCS (Traction)

Event Count by Functional Category, EventAttr N-0 v N-1 and isAlarm

isAlarm ● False ● True

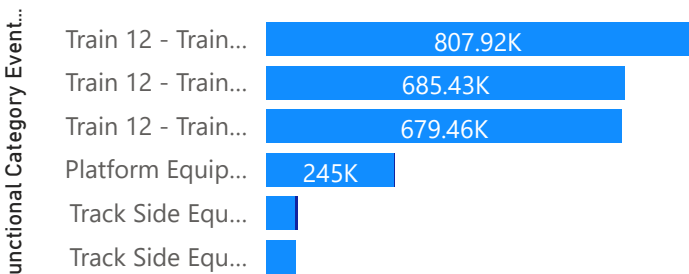


Event Attribute Filter (GEO N-1)

- ☐ Access Mgmt System
- ☐ CCTV System
- ☐ Depot OCS (Traction)

Event Count by Functional Category, EventAttr N-0 v GEO N-1 and isAlarm

isAlarm ● False ● True



SCS_TIME	GeoSector	GeoCode	AssetClass	AssetSubClass	EQUIPMENT_NAME	ASSET_ID_RAW	Functional Category	EVENT_DESC_CAT
2021-01-24 02:49:13.303142144	24	BGK	SIG	DMS	:BGK:TRAS:DMS_0001:ADCF_0003	SIG/BGK/B2/DMS0301	Track Side Equipment	Local-Adjacent Link Status
2021-01-27 01:34:46.806466048	14	PGL	SCS	RTU	:PGL:BMF:PMSB_0002:RTUB_0022	SCS/PGL/B1/RTU22	ISCS Eqpt & Intf Devices	Primary/Standby State
2021-01-27 01:34:50.348576000	14	PGL	SCS	RTU	:PGL:BMF:PMSB_0002:RTUB_0022	SCS/PGL/B1/RTU22	ISCS Eqpt & Intf Devices	Primary/Standby State
2021-01-27 01:34:53.879528960	14	PGL	SCS	RTU	:PGL:BMF:PMSB_0002:RTUB_0022	SCS/PGL/B1/RTU22	ISCS Eqpt & Intf Devices	Primary/Standby State
2021-01-27 01:34:57.407635968	14	PGL	SCS	RTU	:PGL:BMF:PMSB_0002:RTUB_0022	SCS/PGL/B1/RTU22	ISCS Eqpt & Intf Devices	Primary/Standby State
2021-01-27 01:35:00.935493888	14	PGL	SCS	RTU	:PGL:BMF:PMSB_0002:RTUB_0022	SCS/PGL/B1/RTU22	ISCS Eqpt & Intf Devices	Primary/Standby State
2021-01-12 02:16:37.106828800	4	CNT			:CNT:TRAS:PTFM_0001	CNT_PTFM_0001	Platform Equipment	PSD Service Status
2021-01-12 02:16:45.947508992	4	CNT			:CNT:TRAS:PTFM_0001	CNT_PTFM_0001	Platform Equipment	PSD Service Status
2021-01-12 02:17:22.533613056	4	CNT			:CNT:TRAS:PTFM_0001	CNT_PTFM_0001	Platform Equipment	PSD Service Status
2021-01-12 02:17:47.517100032	4	CNT			:CNT:TRAS:PTFM_0001	CNT_PTFM_0001	Platform Equipment	PSD Service Status
2021-01-12 02:18:08.206688000	4	CNT			:CNT:TRAS:PTFM_0001	CNT_PTFM_0001	Platform Equipment	PSD Service Status
Total	40074780							

Slicer Pane (Show)

Key influencers Top segments

What influences AnomalyProb to

Increase

When...

GeoCode is NED

EventAttr_N-1 is 12 - Action Needed (from operator for recovery) - YES

EventAttr_GEO_N-1 is 12 - Action Needed (from operator for recovery) - YES

EventAttr_GEO_N-1 is 10 - Timetable successfully autoloading - NO ACK

EventAttr_N-1 is 10 - Timetable successfully autoloading - NO ACK

sentimentScore_N-1 is more than 0.5

sentimentScore_GEO_N-1 is more than 0.5

Profile Filters

Filter - CC

All

Filter - FWC

All

Filter - PFR

All

Filter - TSR

All

Slicer Controls

Reset Slicers

Slicer Pane (Hide)

Date

1/1/2020

31/12/2022

Hour of Day

0

23

Is Alarm

All

Is Nuisance Event

All

Location Info

All

Asset Info

All

Event Info

All

Severity Class

All

Mean Outlier Probability

0.02257

0.78850

Outlier Strength

0

5

Engineering Hours

All

Benign Event

All

Server Crash Warning

All

Sentiment Class

All

Sentiment Worsen

All

Severity Worsen

All