Monitor model Python code.

```
asnath@AssynathJr:~/AIOps_Labs/PrometheusSandbox/containers/app_one$ python3 prophet_model.py
00:37:32 - cmdstanpy - INFO - Chain [1] start processing
00:37:32 - cmdstanpy - INFO - Chain [1] done processing
The MAE for the model is 0.322746842241679
The MAPE for the model is 2.4258735739961073
                   ds         y      yhat  yhat_lower  yhat_upper  anomaly
3   2024-09-24 19:50:23  0.887743  0.354907   -0.098736    0.837141        1
4   2024-09-24 19:51:23  0.777987  0.352648   -0.151691    0.777917        1
5   2024-09-24 19:52:23  0.989466  0.350388   -0.118405    0.820202        1
7   2024-09-24 19:54:23  0.942417  0.345870   -0.103310    0.782649        1
10  2024-09-24 19:57:23  0.915383  0.339093   -0.135386    0.766022        1
17  2024-09-24 20:04:23  0.835194  0.323280   -0.079040    0.739106        1
19  2024-09-24 20:06:23  0.871981  0.318762   -0.148782    0.754901        1
23  2024-09-24 20:10:23  0.850499  0.309725   -0.146439    0.797146        1
24  2024-09-24 20:11:23  0.843827  0.307466   -0.175471    0.731688        1
25  2024-09-24 20:12:23  0.935422  0.305207   -0.111580    0.772121        1
29  2024-09-24 20:16:23  0.803814  0.296171   -0.172682    0.721137        1
31  2024-09-24 20:18:23  0.968824  0.291653   -0.161799    0.757459        1
39  2024-09-24 20:26:23  0.883032  0.273580   -0.179935    0.729912        1
42  2024-09-24 20:29:23  0.868228  0.266803   -0.162281    0.710237        1
46  2024-09-24 20:33:23  0.744935  0.257767   -0.234634    0.726741        1
47  2024-09-24 20:34:23  0.916657  0.255508   -0.182973    0.697404        1
53  2024-09-24 20:40:23  0.829814  0.241953   -0.176466    0.729905        1
```

Figure 1: Anomalies in the model with MAE and MAPE values

After Updating the Prophet model:

```
asnath@AssynathJr:~/AIOps_Labs/PrometheusSandbox/containers/app_one$ python3 updated_prophet_model.py
Fetching training data...
Training model...
21:51:14 - cmdstanpy - INFO - Chain [1] start processing
21:51:14 - cmdstanpy - INFO - Chain [1] done processing
Fetching test data...
Making predictions...
The MAE for the model is 0.22456602672623724
The MAPE for the model is 0.5843459849280832
Anomalies detected:
                   ds         y      yhat  yhat_lower  yhat_upper  anomaly
5  2024-09-25 21:52:04  0.949811  0.416422    0.075006    0.731036        1
Waiting for next cycle...

Fetching training data...
Training model...
21:53:15 - cmdstanpy - INFO - Chain [1] start processing
21:53:15 - cmdstanpy - INFO - Chain [1] done processing
Fetching test data...
Making predictions...
The MAE for the model is 0.42317184098102256
The MAPE for the model is 0.6033093204522443
Anomalies detected:
                   ds         y      yhat  yhat_lower  yhat_upper  anomaly
0  2024-09-25 21:53:15  0.936199  0.188775    0.052735    0.328595        1
1  2024-09-25 21:53:25  0.522767  0.188775    0.060310    0.324090        1
2  2024-09-25 21:53:35  0.711871  0.188775    0.049703    0.325375        1
5  2024-09-25 21:54:05  0.965646  0.188775    0.062204    0.335152        1
6  2024-09-25 21:54:15  0.692193  0.188775    0.045915    0.329418        1
Waiting for next cycle...
```

```
Fetching training data...
Training model...
21:55:15 - cmdstanpy - INFO - Chain [1] start processing
21:55:15 - cmdstanpy - INFO - Chain [1] done processing
Fetching test data...
Making predictions...
The MAE for the model is 0.22472775757865096
The MAPE for the model is 0.5430210992673362
Anomalies detected:
                  ds         y      yhat  yhat_lower  yhat_upper  anomaly
2 2024-09-25 21:55:35  0.694986  0.314256   -0.028655    0.649927        1
4 2024-09-25 21:55:55  0.935434  0.314256   -0.051747    0.666544        1
Waiting for next cycle...

Fetching training data...
Training model...
21:57:15 - cmdstanpy - INFO - Chain [1] start processing
21:57:15 - cmdstanpy - INFO - Chain [1] done processing
Fetching test data...
Making predictions...
The MAE for the model is 0.2763634770330478
The MAPE for the model is 0.597581955840729
Anomalies detected:
                  ds         y     yhat  yhat_lower  yhat_upper  anomaly
0 2024-09-25 21:57:15  0.631725  0.23943    0.052669    0.429571        1
1 2024-09-25 21:57:25  0.572355  0.23943    0.040868    0.428883        1
4 2024-09-25 21:57:55  0.605591  0.23943    0.038911    0.431909        1
5 2024-09-25 21:58:05  0.520684  0.23943    0.038051    0.432563        1
6 2024-09-25 21:58:15  0.515301  0.23943    0.051724    0.428721        1
Waiting for next cycle...
```

Figure 2 & 3: Showing the results of the prophet model on the first 60-seconds iterations.