AWS Industrial Predictive Maintenance
Machine Learning Model Reference Architecture

Create a Predictive Maintenance (PdM) Machine Learning (ML) model using AWS IoT SiteWise and AWS IoT Analytics with Amazon SNS anomaly detection notifications.

1. Deploy an AWS IoT SiteWise Gateway to connect to the factory machines OPC-UA Servers.
2. Create a view in AWS IoT SiteWise and define the factory machines as assets.
3. Define the metrics to be monitored for the factory machines.
4. Build a Docker image and add it to Amazon Elastic Container Registry (Amazon ECR).
5. In AWS IoT Analytics, create a container data set from the AWS IoT SiteWise data store and link it to your Docker container.
6. From AWS IoT Analytics, create a new Jupyter Notebook for the data set created from AWS IoT SiteWise to create a Predictive Maintenance (PdM) Machine Learning (ML) model.
7. Visualize your analysis using Amazon QuickSight on the AWS IoT Analytics data source.
8. Create a topic for anomaly detection notifications in Amazon Simple Notification Service (Amazon SNS) and configure the trigger in your model.