BullSequana Edge

Entertainment

Predictive maintenance in amusement parks

Predict breakdowns before they appear to make a difference in customer experience.

Breakdown prediction: one of the biggest stakes for amusement park operators.

The world's largest amusement parks attract an average of more than 40,000 visitors per day. Visitor satisfaction is a priority for operators. This depends mainly on the number of attractions open to the public, the waiting time, the quality of the attraction (scenery, enchantment, thrills etc.).

Today, about 11,000 sensors on each ride provide information on the condition of the engine, brakes and structure. When the motor of a roller-coaster starts to weaken, no one knows that a motor problem is occurring. This problem usually leads to a gradual stop of the motor, however the roller-coaster works until the motor stops completely.

At that moment, the sensors trigger an alert and the ride is closed to the public. When the roller-coaster breaks down, it must be immediately evacuated.

Then, the maintenance teams can take over to repair the engine. On average, it takes 4 days from the beginning of engine weakening to failure. Maintenance operators deal with the dissatisfaction of visitors, who have a reduced choice of attractions for the same admission price regardless of the number of attractions open.

Predictive maintenance in amusement parks

How can BullSequana Edge enhance quality control?

Take advantage of your IoT data for quality control

BullSequana Edge offers significant benefits to predict breakdowns.

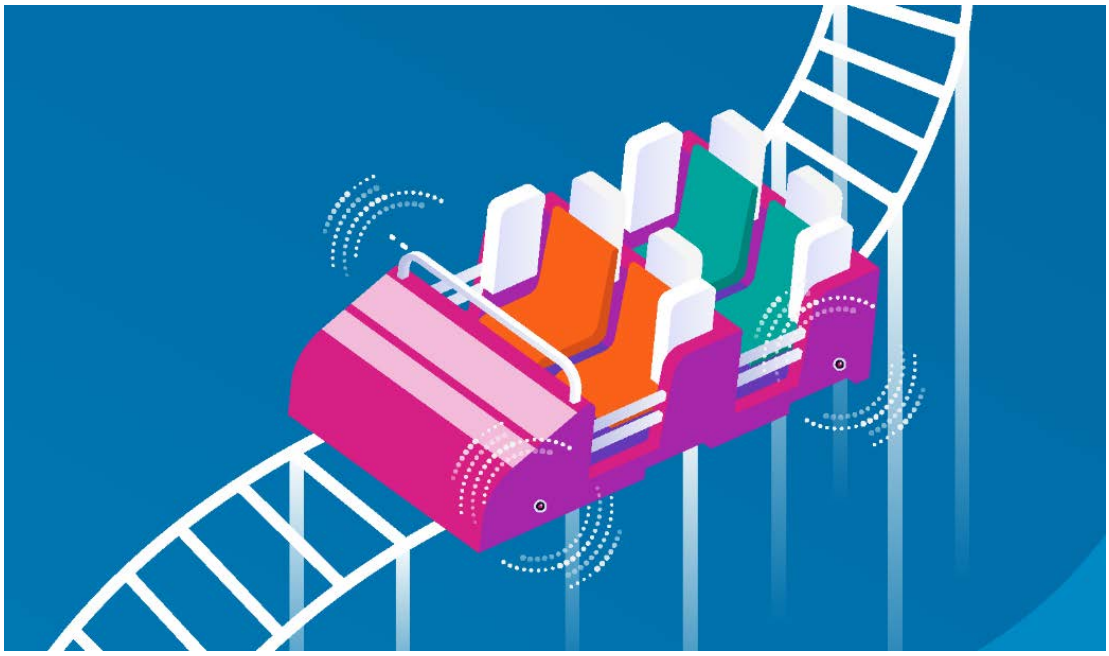
- **Analyze high volume video data**
  The installation of a camera tunnel requires very high computing power to analyze large volumes of video data in real time. Indeed, cameras scan products at 360 degrees, which produces 1GIGA BITS of data per minute.
  This type of analysis from workforce would be extremely costly and time-consuming. Edge computer vision uses deep learning algorithms to analyze video data flows, using the computing power of the BullSequana Edge.
- **Decide in real time**
  Real-time decision speeds up the production process. BullSequana Edge allows you to obtain information on a defective product 22x faster. Here, critical lead times on quality control chains are optimized 24H 7/7.
- **Secure data locally.**
  Intrusion detection and data encryption systems protect your data from external threats.
- **Reduce costs**
  Data storage and analysis cost in the cloud is significant for high volume and complex data. Thanks to local and autonomous storage and analysis, BullSequana Edge allows lower costs. Data is sent to the cloud for mid-long term storage and monitoring.

Deploy BullSequana Edge in any type of environment

To make the best local decisions, you need to have local information. BullSequana Edge is optimized to operate in complex environments (dust, extreme temperatures, unstable grounds, etc.), which makes it possible to analyze video streams from multiple cameras locally. Our product can be safely placed on the roller-coaster installation. It can be placed in rack to ensure physical protection, cooling, early fire detection and power distribution. It offers you the possibility to have a remote and safe data container in the middle of the amusement park.

Meet higher customer expectations with BullSequana Edge.

To predict maintenance, IoT captures information on signs of wear and tear, deformation or other damage to check the integrity of the equipment (mechanical parts, lock nuts, lock washers, safety pins, restraint and locking systems, controls, brakes, emergency stop devices and communication systems). BullSequana Edge enhanced by Edge Data Analytics sends an alert in real-time. Powerful deep learning algorithms identity the source and nature of an issue, triggers an alert and recommends a mitigating action to fix or tune the roller-coaster and maximize customer satisfaction



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