Introduction

In this lesson, we will discuss stream processing and its use cases.

We'll cover the following

- Rise of data-driven systems
- Use cases for data-stream processing

Rise of data-driven systems#

Our world today is largely data-driven and is progressing towards becoming completely data-driven. With the advent of the Internet of Things(IoT), entities have gained self-awareness to a certain degree, and they are generating and transmitting data online at an unprecedented rate. They are capable of communicating with each other and making decisions without any sort of human intervention.

Use cases for data-stream processing#

The primary large-scale use of IoT devices is in industry sensors, smart cities, electronic devices, wearable healthcare body sensors, etc.

To manage the massive amount of streaming data we need to have sophisticated backend systems in place to gather meaningful information

and archive/purge not so meaningful data.

The more data we have, the better our systems evolve. Today's businesses rely on data. They need customer data to make future plans and projections. They need to understand the user's needs and their behavior. All these things enable businesses to create better products, make smarter decisions, run more effective ad campaigns, recommend new products to their customers, gain better insights into the market, etc.

All this study of data eventually results in more customer-centric products and increased customer loyalty.

Another use case of processing streaming-in data is tracking the service efficiency, for instance, getting the *Everything is Okay* signal from the IoT devices used by millions of customers.

All these use cases make stream processing key to businesses and modern software applications. *Time-series databases* is one tech we discussed that persist and run queries on real-time data, ingesting in from the IoT devices.

In the next lesson, we will explore the components involved in data-stream processing. We will also look at some of the key architectures in the data processing domain.

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Message Queue Quiz

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Data Ingestion

Mark as Completed

Report an Issue