

## Database Systems for IoT

(This course provides an introduction of databases for IoT and platforms for data analytics in the context of the Internet of Things (IoT). It covers the technologies used to collect, store, process, and analyze the vast amount of data generated by IoT devices. The course aims to equip students with the skills necessary to implement effective data management for IoT applications.

### Course Objectives:

Understand the principles and challenges of IoT data management.

Learn about data collection, storage, and processing techniques suitable for IoT.

Explore data analytics methods and tools applicable to IoT datasets.

Gain practical experience through hands-on projects and case studies.)

### Other tentative high level topics:

1. SQL vs. NoSQL databases (includes Time Series Databases)
2. Database for edge vs. Database for cloud. (includes the concept of store and forward, and bulk insertion)
3. IoT data ingestion using (MQTT vs. REST Protocol)
4. Managing Database Connections (ODBC vs. REST Protocol)
5. Platforms for Analyzing IoT Data (Elasticsearch)