Data Science Project Outline

## Scenario: **Online Retailer**

**What is the business problem that needs solving?**

developing a system to reduce the amount of floor space required and allows business to function at full capacity, and safe documents through standard security procedures.

**How can data science solve this problem?**

the organization improves the business performance and increase productivity by leveraging technology.**How can a design thinking approach benefit the project?**

A design thinking approach can be beneficial in this case by identifying the needs through the examination of the current trends.

the project considered successful when an authorized user only can store, manage, and easily retrieve documents.

**What key stakeholders should the project include?**

Our project should include the following stakeholders:

Privacy and security challenges may include:

Customer Data Protection: Ensuring compliance with data privacy regulations (e.g., GDPR, CCPA) when handling customer information.

Data Encryption: Safeguarding sensitive data during storage, transmission, and processing.

Access Control: Implementing proper access controls to limit data access to authorized personnel only.

Data Anonymization: Protecting customer identities while still extracting valuable insights.

Secure Model Deployment: Ensuring that deployed models are protected against adversarial attacks or unauthorized access.

**What privacy and security challenges might arise?**

the challenges might arise during the processing of the customer’s data due the privacy and security regulations. For example in Europe, we should pay attention the requirement of the compilation of data for an EU- citizen.

**What data science outcome(s) (regression, classification, clustering) could be achieved?**

K-Means Clustering – for customer segmentation that groups similar customers together for targeted recommendation.

• Random Forest – To forecast the inventory space in the next couple of months and determine if the organization should increase its inventory space.