

- Title
- 4 keywords
- short abstract, explaining:
 - 1 Objective (which problem do you want to approach?)
 - 2 Scope (What context will you consider? E.g. a specific time window, a specific geographical area, a specific business area...)
 - 3 Dataset(s)
 - 4 ABA topics you expect to apply (ok to be vague on this...)

Data

[Food Waste \(kaggle.com\)](https://www.kaggle.com/datasets/foodwaste)

[Fresh and Rotten Classification \(kaggle.com\)](https://www.kaggle.com/datasets/freshandrottenclassification)

[Food Balance Sheets \(kaggle.com\)](https://www.kaggle.com/datasets/foodbalancesheets)

<https://developer.sallinggroup.com/api-reference>

<https://api.smartwaste.co.uk>

Title: Driving Sustainability and Profitability: Leveraging AI to Minimize Food Waste in Retail Supply Chains

Title: "Final Fork: The AI Crusade Against Food Waste"

Keywords: AI, Food Waste, Retail, Sustainability

Abstract:

Objective: This project aims to address the pressing issue of food waste by leveraging data from the Salling Group APIs and applying AI. The objective is to provide actionable insights to promote sustainability and resource conservation in Denmark by identifying, quantifying, and strategizing against food waste within the retail sector.

Scope: The scope of this project covers two main aspects: retrieving information on food waste from nearby stores (Føtex, Netto, Basalt, and Bilka) and obtaining insights into relevant products through the Product Suggestions API. We will focus on a specific geographical area, Denmark, and consider data related to clearance sales and product suggestions from Bilka ToGo stores.

Dataset(s): The primary dataset for this project will be sourced from the Anti Food Waste API provided by the Salling Group. This API provides information about heavily discounted food products in stores due to short expiry. Additionally, we will utilize data from the Stores API to access information about store locations, opening hours, and attributes of Salling Group's ~1,500 stores across Denmark, Poland, and Germany.

ABA Topics Expected to Apply: The project will apply various topics in Advanced Business Analytics,

including data retrieval, data preprocessing, predictive modeling, and recommendation systems. Specifically, we will employ machine learning techniques to analyze food waste patterns, identify frequently discounted products, and recommend relevant products to users. Additionally, we will explore the use of spike protection mechanisms to manage API traffic efficiently and ensure reliable data retrieval.

This project underscores the potential of AI-driven analytics to address societal challenges such as food waste, ultimately contributing to more sustainable consumption patterns and environmental stewardship.

Objective: Utilize AI to identify, quantify, and strategize against food waste within the retail sector as an activism initiative to promote sustainability and resource conservation.

Scope:

Limit the analysis to food waste within retail chains covered by Salling Group's geographical area.
Analyze data from specific periods with high waste potential, like holidays.

Dataset(s):

Use Salling Group's Anti Food Waste API to track food items nearing expiry.
Analyze data from the Stores API to understand the dynamics of waste across different locations.

ABA topics:

Develop interventions using AI to predict and mitigate food waste.
Apply behavioral insights to encourage responsible consumer purchasing patterns.
Use AI to inform and adjust food supply chain practices based on predictive analytics.