**Problem statement formation**

In what areas should the 5 worst performing food service establishments in Durham NC invest training in to increase their health inspection scores by 5 percentage points within a year?

**Context**

Food service establishments are run by franchisees, corporate organizations, or sole owners.These establishments develop cleaning and hygiene procedures for operational efficiency, food safety, and brand protection. However, due to various factors, the establishments find it challenging to follow through on procedures and this leads to health department violations that damage brand perception.

Following the COVID-19 pandemic, restaurant goers have become more sensitive to matters of public health. Food service establishments which are able to maintain clean and hygienic facilities, will stand out to customers in the foodservice market. This study will predict inspection scores or next violation based on past health inspection performances and recommend actions to increase inspection score.

**Criteria for success**

* Determine most frequent health department violation
* Predict health department score or the next violation based on past performance.
* Find opportunity for improvement for the 5 worst performing food service establishments.

**Scope of solution space**

Food establishment in this study refers to any establishment primarily set up for cooking and serving ready-to-eat foods to the public. This does not include institutions which serve food as part of another major service (e.g. daycares, schools, etc.). The scope of the study is the county of Durham in North Carolina.

**Constraints**

May not have appropriate data to build a model for predicting health inspection scores based on past performance. Despite finding out what actions to take to increase inspection scores, other factors may prevent implementation.

**Stakeholders**

VP of Research, Development & Engineering - Ecolab

Food Safety & Water Team Program Manager - Ecolab

External Customers (Food Service Establishments)

**Data sources**

Durham NC Food Inspection Violations - [Food Inspection Violations - dataset by durhamnc | data.world](https://data.world/durhamnc/violation-data)

Durham NC Food Health Inspections - [Food Health Inspections - dataset by durhamnc | data.world](https://data.world/durhamnc/food-health-inspection-data)

Durham NC Restaurants and Services - [Restaurant and Services - dataset by durhamnc | data.world](https://data.world/durhamnc/restaurants-data)