*Hypothesis 1:*

Item features can be used to determine if an item will be cannibalized when another item is promoted.

*Hypothesis 2:*

A machine learning system can give better results than a statistical model for evaluating the expected profit/loss of an item promotion (using correlation, item features).

*Outcome of the project:*

A system that evaluates the outcome of an item promotion, taking into account cannibalization and correlation, using features, sale history and forecasts. The system outcome is the expected value of the promotion ($)

*Models that will be examined:*

- Baseline model: statistical model based on sale history correlation.

- Neural networks

- Clustering (features)

- …

*Future work*

Iterate over all items to find the best items for promotion. This way the system would be able to give the retailer a list of the products that are predicted to yield the highest total profit, when promoted.