

Project Guidelines

Primary Goal

The primary goal of this project is to have everyone in the class experience conducting an Exploratory Data Analysis through from beginning to end. Students will get a taste of what it's like to be a statistician, receiving the raw data and "getting a feel" for the data. Ultimately, statistics is about crafting a story. What is your story? What do you think is useful for others within the company to know? Students can use any approaches learned either in this course or externally to familiarize themselves with the supplied data. However, using approaches not covered in class will not gain you points, only allowing you to be penalized for improper usage if applied incorrectly.

The Data

A larger, national grocery retailer tracks cost and productivity with respect to shipping. The data provided refer to one distribution center for a one-year period. The experimental unit here is a week's worth of activity. This means that each row in the data refers to one week's worth of activity. The variables collected include the following: number of cases shipped (NumCasesShipped), the indirect cost of the total labor hours as a percentage (IndirectCosts), whether or not the week was a holiday week (Holiday – coded with 1 implying the week had a federal holiday in it, and 0 otherwise), the total labor hours (TotalLaborHours), and the week of the year that the information refers to (Week).

Layout

This project is largely self-driven in nature. Part of the challenge is determining direction and actionable, concrete next steps. You are working for a company and your boss gives you an open ended assignment: "we have this data and we want to pull something useful from it." Something very similar to this was one of my first tasks when I started working at Con Edison in NY. What's your story?

As per almost any workplace assignment, this project will have 3 key deliverables: an initial proposal presentation, a proof of concept presentation, and a final presentation. Templates will be posted on HuskyCT for you to follow. These templates are all I believe to be necessary for each step, however you're always free to add anything you feel is necessary.

Timeline

Key dates for this project are as follows:

Thursday 7/12 – Project Partner Selection via email by EOD (5:00pm)

Tuesday 7/17 – Project Meetings after class to discuss progress so far

Thursday 7/19 – Proposal Presentations in class

Thursday 7/26 – Proof of Concept (POC) Presentations in class

Tuesday 7/31 - Project Meetings after class to discuss progress so far

Wednesday 8/8 – Final Presentations in class

Deliverables

There are 3 major deliverables associated with this project. Each of the 3 deliverables has a presentation template to follow in order to make sure that you've addressed the proper information. The project proposal essentially addresses the question "what will you do". The proof of concept is meant to be a rough draft of your final deliverable. It's meant to show that you have a firm understanding of what the final deliverable will be. The final presentation is meant to be the final step in the process. For each of the presentations, take the view that your audience is the team that is responsible for what you aim to present on. Whether this is the sales team, marketing team, logistics, etc., the assumption is that your audience is well-versed in how the company runs with respect to the operations you are discussing.