

Project 1 – Guidelines

Last updated: August 20, 2024

1 Instructions

Work on your own. Submit 1 report per student.

Read the case, “Forecasting Beer Demand at Anadolu Efes”.

Assume the role of Selin Baydar. Write her final report, using the guidelines we covered in class on writing an operations research project report. In particular, your report should contain the following sections:

1. Introduction
2. Data
3. Model
4. Results
5. Conclusion

You may also find the second to last paragraph of the case (on page 145) helpful in writing your report.

Interim drafts

Over the next few weeks, we will work through the modeling and analysis for this project together in class. We will also devote a considerable portion of class time learning how to write a report for an operations research project.

About every week, you will be asked to submit an interim draft of one of the sections. You will receive feedback on these interim drafts, but they will not be graded. Use this feedback to improve the final draft of your report.

Resubmissions

Because you will be submitting and receiving feedback on your interim drafts, no resubmissions are allowed for this project.

2 Grading rubric details

	Exemplary	Satisfactory	Developing	Unsatisfactory
C2 Describing the modeling framework	<p>Chooses an appropriate modeling framework and identifies key components of the model</p> <ol style="list-style-type: none"> 1. Chooses an appropriate type of regression model 2. Describes the type of regression model used 3. States the general model mathematically 4. Briefly explains why the type of regression model is appropriate 5. Carefully describes the response variable and all the explanatory variables, including units 6. Explains the variable selection process 7. States the explanatory variables that made it into the final model 	<p>Chooses an appropriate modeling framework but does not specify model components</p> <ul style="list-style-type: none"> • Does: 1, 2, 3, 4 • Does not do one or more of the following: 5, 6, 7 	<p>Does not choose an appropriate modeling framework</p> <ul style="list-style-type: none"> • Does not do: 1 	<p>Chooses a modeling framework that does not use operations research techniques</p>
C4 Correctness and complexity of model	<p>Model correctly captures major features and some subtleties of the problem; recognizes and properly justifies all assumptions</p> <ol style="list-style-type: none"> 1. Constructs model with the correct response variable 2. Constructs model with a reasonable set of explanatory variables 3. Correctly performs and discusses diagnostics to determine whether the regression model conditions are reasonably met 4. Uses variable transformation to construct model that reasonably satisfies regression model conditions 	<p>Model correctly captures major features of problem; identifies key assumptions</p> <ul style="list-style-type: none"> • Does: 1, 2, 3 • Does not do: 4 	<p>Model incorrectly incorporates at least one important feature of the problem; model involves at least one oversimplifying assumption</p> <ul style="list-style-type: none"> • Does: 1, 2 • Does not do: 3, 4 	<p>Model does not give useful information; does not state or include necessary assumptions</p>