

MA477: Data Science
Lesson 6 Board Sheet — 21 January 2026
United States Military Academy, West Point
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1 Lesson 6 Linear Regression

- Understand the linear regression model (parameters and estimation) and its usage (see important questions in 3.2.2)
- Assess model accuracy using common metrics.

2 Limited data discussion

1. What are some important measures of our model?
2. What are the benefits of using these measures?
3. How do we apply optimization to the least squares method?

3 Coding Exercise

Pair Up and search for a easily downloadable data set for a regression task. Each pair will work on the Colab notebook template provided and write your to the following points on the board.

You may reference the Lesson 5 Colab Notebook for help.

1. What problem are you answering?
2. How are your referencing your data?
3. What does your data look like?
4. How are you going to fit your model?
5. How well does your model fit?
6. Discuss feature importance.
7. How can you account for model error?

At the end I want several groups to present their results to the class.