

Student Grades

Data Summary:

Columns: Student, Midterm, Final Exam

Data Description:

I created this dataset myself for the purposes of this assignment.

This data set contains information about the midterm and the final exam grades for 10 students.

The midterm grades range from 63-86, and the final exam grades range from 49-90.

The first column shows the student's names, the second column shows the midterm exam grades, and the third column shows the final exam grades.

Goals:

Goal 1: Benchmark Student Performance by Class Average

Goal 2: Track Student Performance Over Time

Goal 3: Highlight Student Performance with Indicators

Goal 4: Analyze Grade Distribution with Histogram

Goal 5: Illustrate the distribution of midterm and final exam scores to understand the overall performance spread.

Worksheet 1:

Goal 1: Benchmark Student Performance by Class Average

Chart Type: Benchmark Chart

Chart 1:

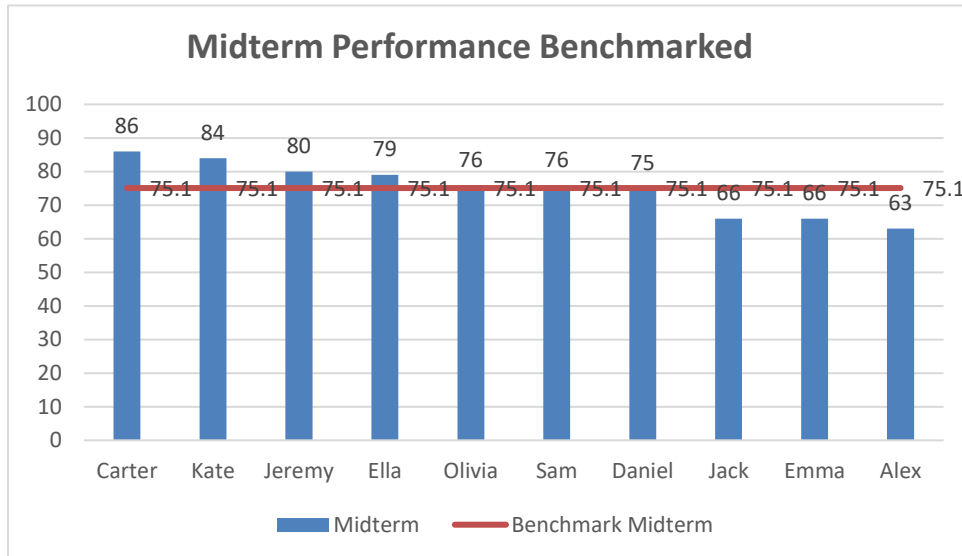
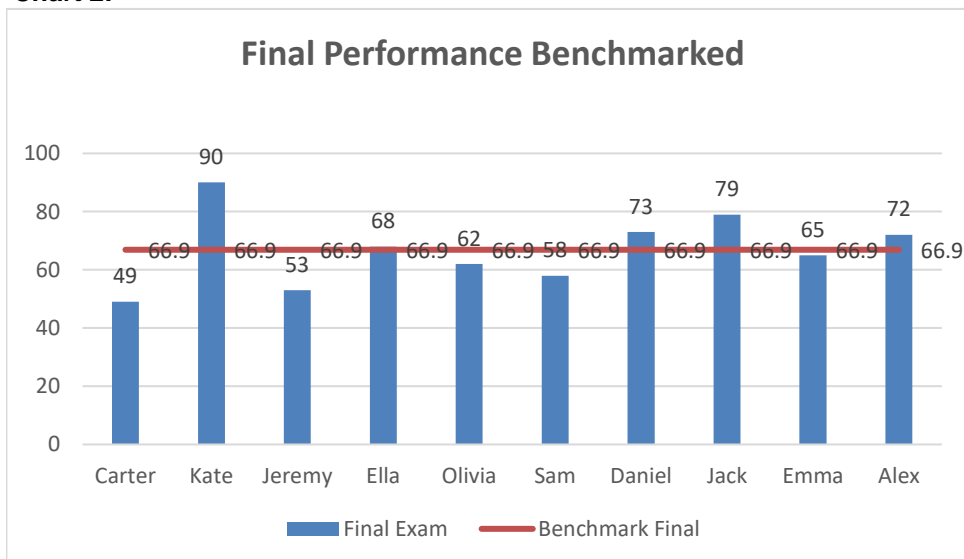


Chart 2:



Story:

These benchmark charts help to compare each student's performances with the class average for each test.

We can see that the chart shows us that for the midterm Carter, Kate, Jeremy, and Ella all performed better than the class average, which Olivia, Sam, and Daniel all performed at around the class average, and Jack, Emma, and Alex all performed below the class average.

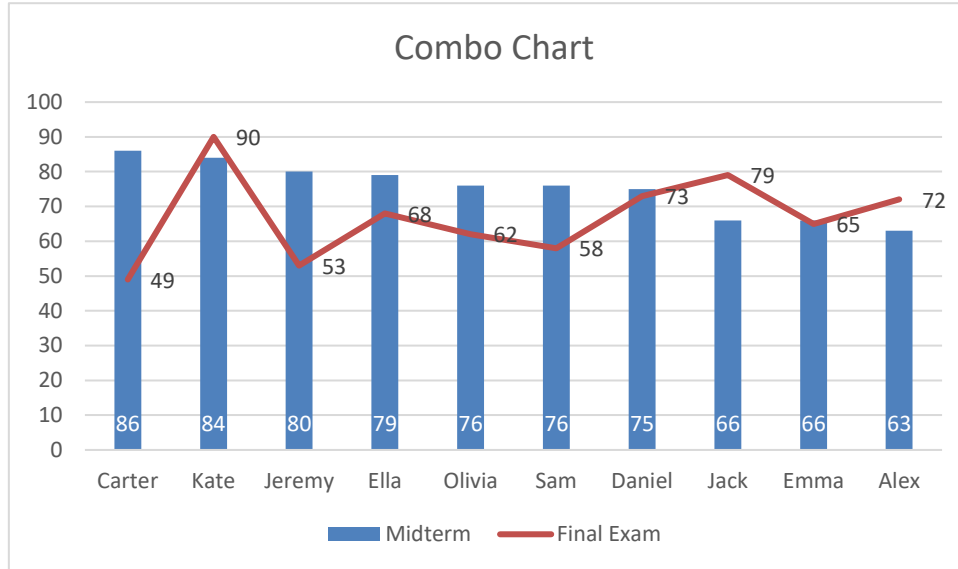
The final performance benchmark chart shows that Kate, Daniel, Jack, and Alex all performed above the class average while Ella, Olivia, and Emma performed at around the average and Carter, Jeremy, and Sam all performed below the class average.

Worksheet 2:

Goal 2: Track Student Performance Over Time

Chart Type: Combo Chart (Line and Column)

Chart:



Story:

This combo chart does a really good job in showing the student's test performances over time.

The combination of the column and line chart helps to show how the final and midterm exams compare to each other.

With this chart we can clearly see that Carter, Jeremy, Ella, Olivia, and Sam all saw significant drop offs going from the midterm to the final.

Daniel and Emma both had very similar scores across both tests.

Kate, Alex, and Jack all saw increases in their scores.

Worksheet 3:

Goal 3: Highlight Student Performance with Indicators

Chart Type: Indicator Chart

Chart:			Chart:		Chart:
Student	Midterm	Final Exam	Overall Grades	Relative Performance	
Carter	86	49	<div><div></div></div> 67.5	<div><div></div></div>	<div><div></div></div>
Kate	84	90	<div><div></div></div> 87	<div><div></div></div>	<div><div></div></div>
Jeremy	80	53	<div><div></div></div> 66.5	<div><div></div></div>	<div><div></div></div>
Ella	79	68	<div><div></div></div> 73.5	<div><div></div></div>	<div><div></div></div>
Olivia	76	62	<div><div></div></div> 69	<div><div></div></div>	<div><div></div></div>
Sam	76	58	<div><div></div></div> 67	<div><div></div></div>	<div><div></div></div>
Daniel	75	73	<div><div></div></div> 74	<div><div></div></div>	<div><div></div></div>
Jack	66	79	<div><div></div></div> 72.5	<div><div></div></div>	<div><div></div></div>
Emma	66	65	<div><div></div></div> 65.5	<div><div></div></div>	<div><div></div></div>
Alex	63	72	<div><div></div></div> 67.5	<div><div></div></div>	<div><div></div></div>

Story:

This indicator chart helps to indicate student performance by having a color associated with a score range, with green generally being good, yellow being fine, and red being bad. It also shows how big of a change the student's had from one to test to the other by including the slopes for them.

It also has an indicator that shows whether the student did better on the midterm or the final.

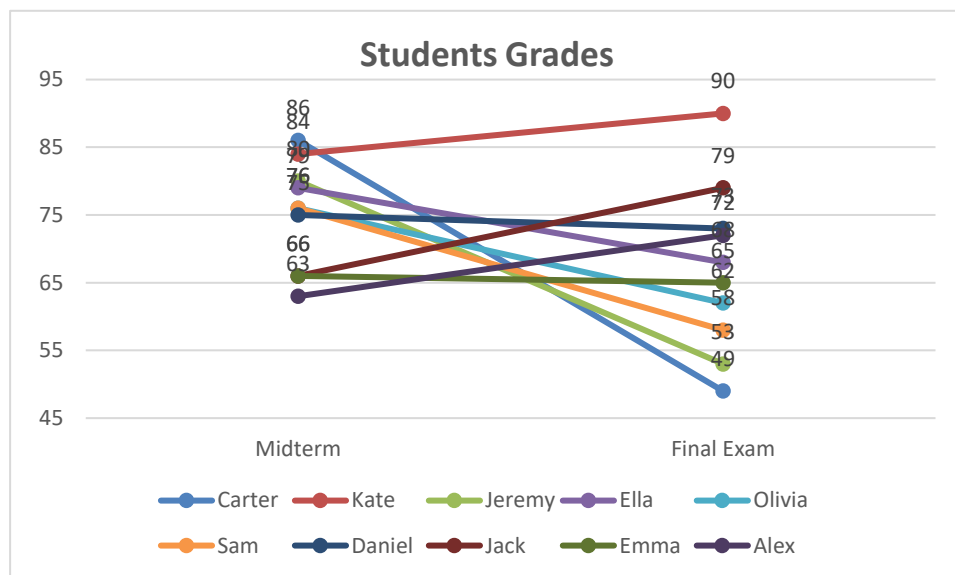
All of this helps to make the data much easier to understand, and shows how well the student's performed.

Worksheet 4:

Goal 4: Analyze the student's changes in their test scores over time in comparison with each other.

Chart Type: Bump Chart

Chart:



Story:

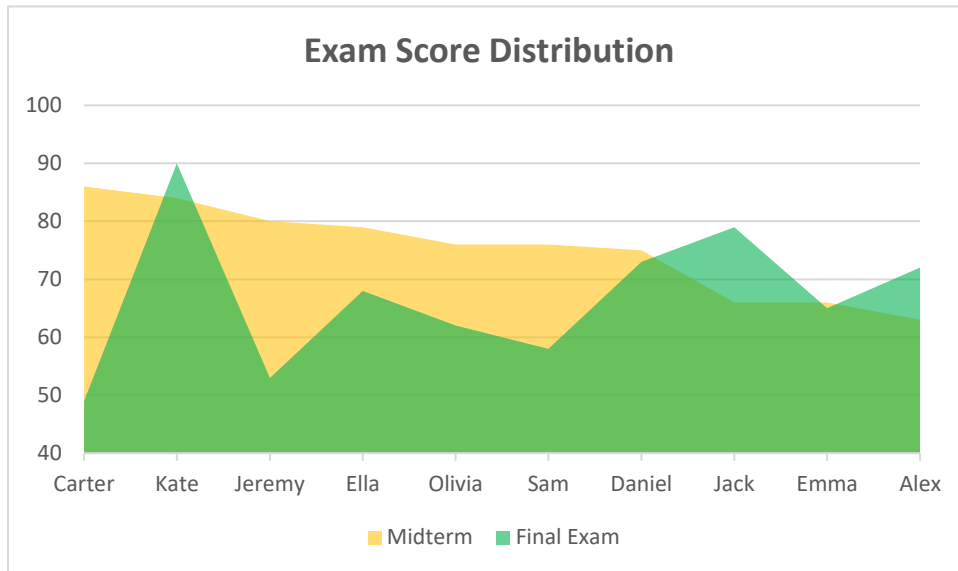
This bump chart does a good job in showing how the student's scores changed from the midterm to the final and does a good job in showing how their scores compare with the other students. Based on this chart we can see that Kate saw the most significant change in her score. We can also see that most other students either got a worst score or around the same score which could signify that the final exam was much more difficult than the midterm.

Worksheet 5

Goal 5: Illustrate the distribution of midterm and final exam scores to understand the overall performance spread.

Chart Type: Area Chart

Chart:



Story:

This area chart helps to illustrate the distribution of midterm and final exam scores to understand the overall performance spread.

This is because it visually represents the distribution of the exam scores for the students which shows which students performed the best for both exams.

What it tells us is that the midterm exam is spread out relatively evenly except for a couple of exceptions, and the final exam spread is a lot more varied.

Student Grades

Student	Midterm	Final Exam	Overall Grades	Benchmark Midterm	Benchmark Final
Carter	86	49	67.5	75.1	66.9
Kate	84	90	87	75.1	66.9
Jeremy	80	53	66.5	75.1	66.9
Ella	79	68	73.5	75.1	66.9
Olivia	76	62	69	75.1	66.9
Sam	76	58	67	75.1	66.9
Daniel	75	73	74	75.1	66.9
Jack	66	79	72.5	75.1	66.9
Emma	66	65	65.5	75.1	66.9
Alex	63	72	67.5	75.1	66.9

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Each row shows the performances for a specific student.

Goals:

Goal 1: Benchmark Student Performance by Class Average

Goal 2: Track Student Performance Over Time

Goal 3: Highlight Student Performance with Indicators

Goal 4: Analyze the student's changes in their test scores over time in comparison with each other.

Goal 5: Illustrate the distribution of midterm and final exam scores to understand the overall performance spread.