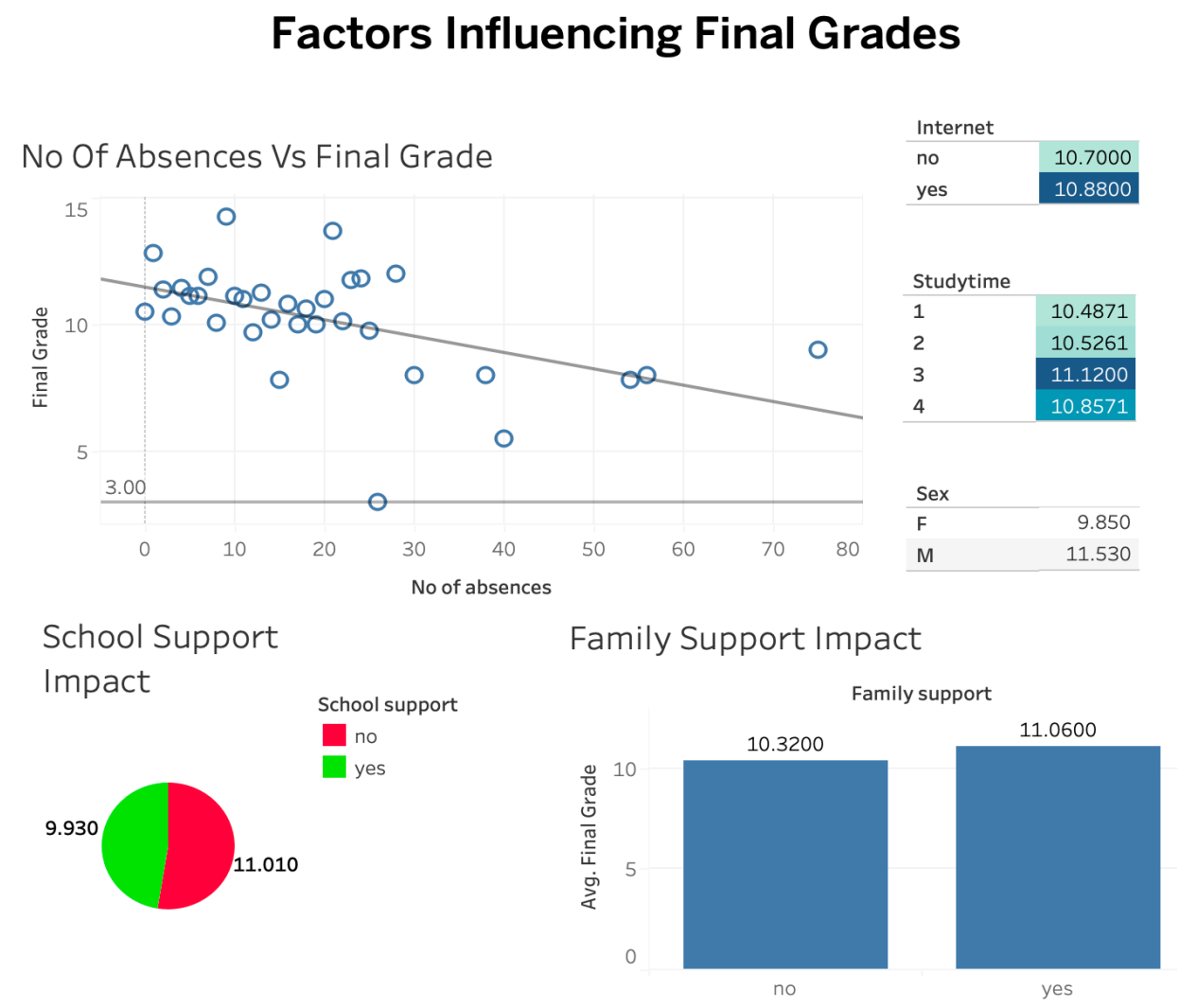
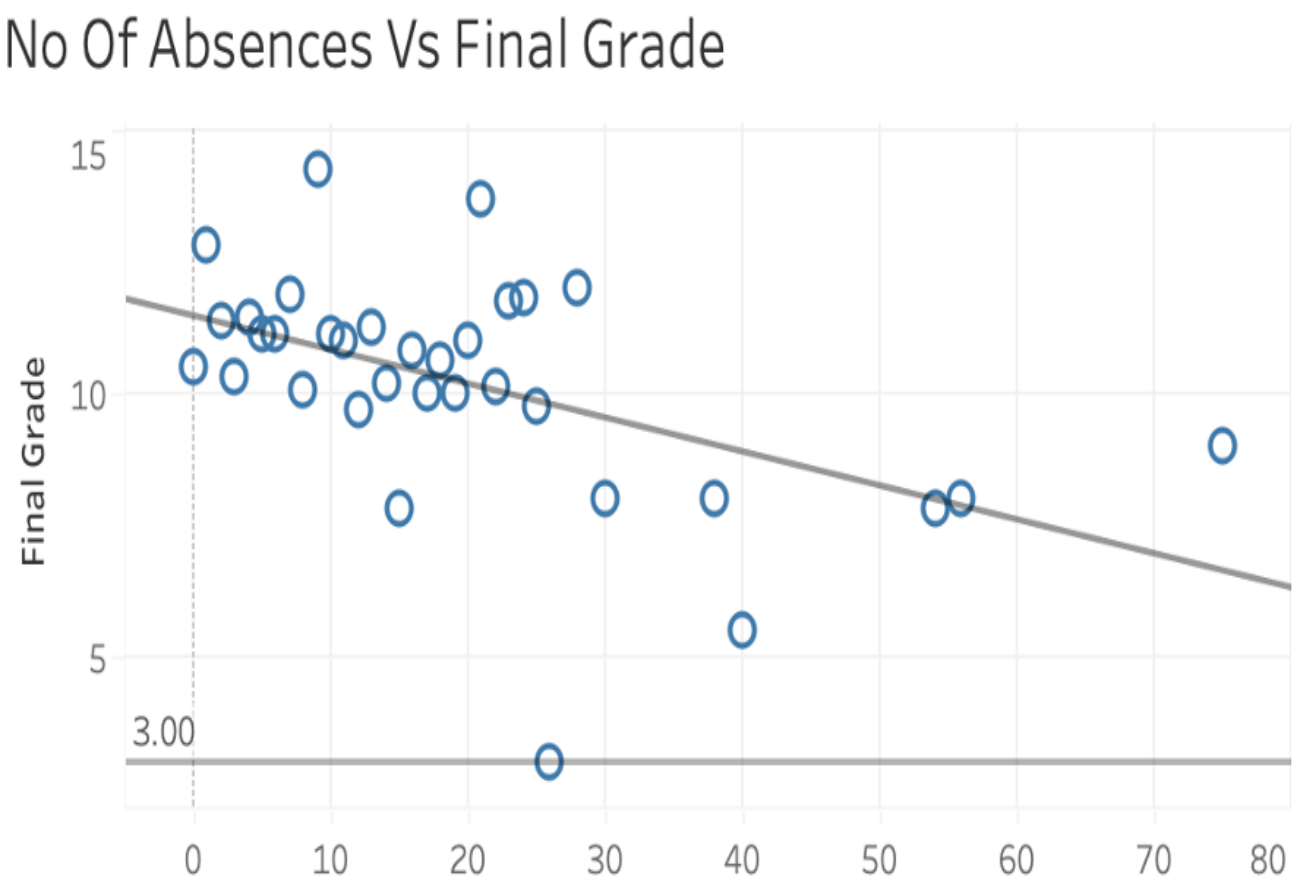
This dashboard presents an analysis of the key factors that influence students' final academic grades. The data used for this study comes from the Student Performance Data Set, which was originally published on the UCI Machine Learning Repository.

The dashboard explores how various elements — such as number of absences, study time, internet access, school and family support, and gender — affect a student's academic performance. The visualizations clearly show patterns.

The dataset used in this analysis is publicly available on the UCI Machine Learning Repository:

[Student Performance Data Set – UCI Repository]





This scatter plot shows a negative correlation between the number of absences and final grades.

Students with fewer absences (0–10 days) tend to score higher grades, typically between 9 and 12.

As the number of absences increases, there is a noticeable drop in final grades.

For students with more than 20 absences, grades drop more sharply, and some even fall close to the minimum passing mark (3.00).

The downward-sloping trend line clearly shows that missing more school days can negatively affect academic performance. This suggests that consistent attendance plays a significant role in maintaining good grades.

Internet	
no	10.7000
yes	10.8800

Studytime	
1	10.4871
2	10.5261
3	11.1200
4	10.8571

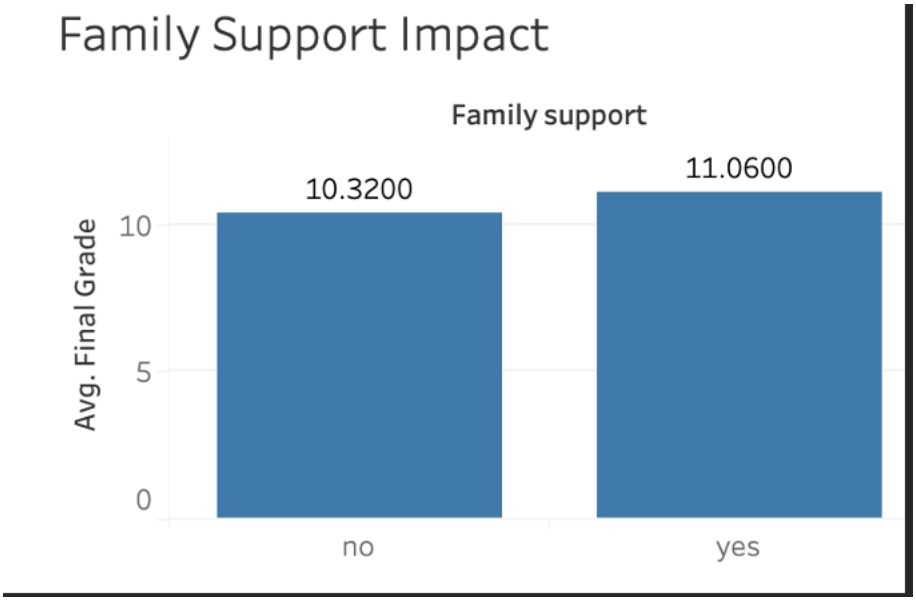
Sex	
F	9.850
M	11.530

Internet Access:
Students with internet access at home have a slightly higher average final grade (**10.88**) compared to those without (**10.70**). This suggests that access to online resources may have a small but positive impact on academic performance.

Study Time:
Students who study more generally tend to score better:

- Those who studied the least (**Level 1**, about **2–3 hours/week**) scored around **10.49**
- The highest average grade (**11.12**) was observed at **Level 3** (around **5–10 hours/week**)
- Interestingly, students at **Level 4** (more than **10 hours/week**) had slightly lower grades than Level 3. This could indicate **burnout** or that excessive study time alone doesn't always guarantee better performance.

Gender:
On average, **male students** scored **11.53**, while **female students** scored **9.85**. This shows a noticeable performance gap, although more context would be needed to fully understand the reasons behind it.

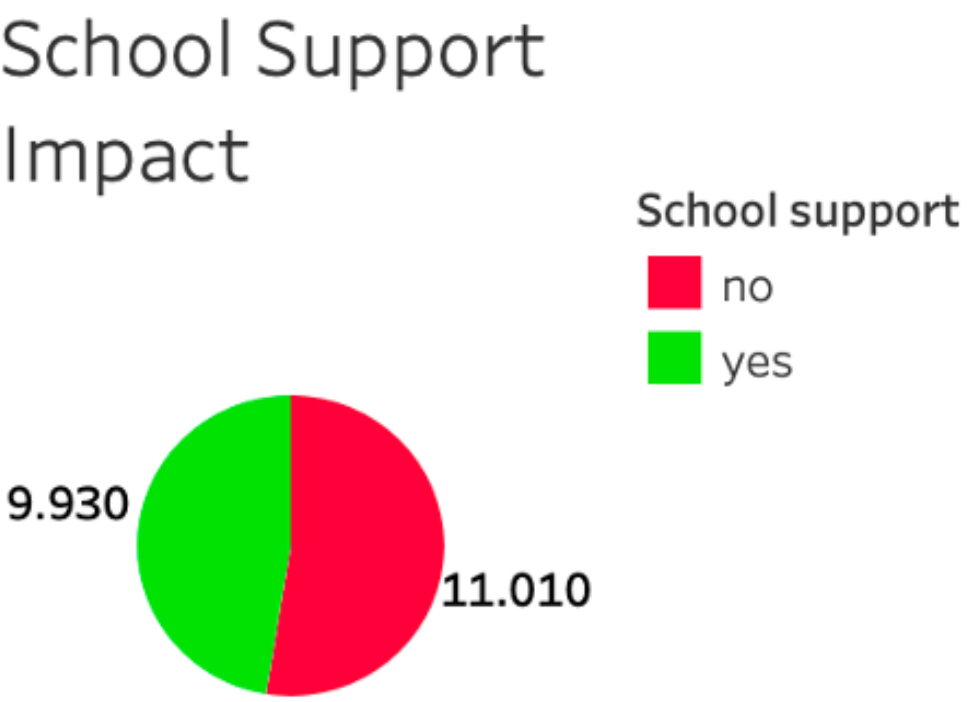


This bar chart shows the impact of family support on students' final grades.

Students who did not receive family support had an average grade of 10.32.

Students who received family support scored higher, with an average of 11.06.

This suggests that having emotional or academic support from family can make a positive difference in a student's academic performance, even if the improvement is moderate.



This pie chart shows the effect of school-provided support on students' final grades.

Students who did not receive school support had an average grade of 9.93.

Students who did receive support scored higher, with an average grade of 11.01.

This indicates that providing additional help through school—such as tutoring, mentoring, or learning resources—can have a positive impact on academic performance. Even a small amount of support appears to help students perform better.

You can view and interact with the full dashboard on Tableau Public using the link below:

View Dashboard on Tableau Public