



Reading Datasets Element

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literally as possible to observe a student's GPA.





Format Anatomies Element

★ Using the element of "list of familiar problems that have been diagnosed in different domains of

data technology includes: political polarization, social separation, discriminatory bias, violations

of privacy, lack of trustworthiness, lack of explainability, undermining the autonomy of

persons, and outright informational coercion", to look at how someone's demographic extends



Problem Statement

The Student's Performance Dataset focuses on students age 15-18 . How does parental involvement and parental education affect a student's GPA?

T. DOLLARS, P.



StudentID

Age

Gender

Ethnicity

Parental-Education

StudyTimeWeekly

Absences

Tutoring

Parental-Support Extracurricular

Sports Music

GPA

Volunteering

GradeClass

Guides for Certain Variables

Ethnicity:

The ethnicity of the students, coded as follows:

O: Caucasian

1: African American

2: Asian

3: Other

Parental-Education: Parental Support: The education level of the The level of parental support, coded as follows: parents, coded as follows: 1: None 1: None 2: High School 2:1 ow **3: Some College** 3: Moderate 4: Bachelor's 4: High 5: Higher 5: Very High

GradeClass: Classification of students' grades based on GPA: 0: 'A' (GPA >= 3.5) 1: 'B' (3.0 <= GPA < 3.5) 2: 'C' (2.5 <= GPA < 3.0) 3: 'D' (2.0 <= GPA < 2.5) 4: 'F' (GPA < 2.0)

More Guides for Certain Variables

Extracurricular: Participation in extracurricular activities, where 0 indicates No and 1 indicates Yes.

Sports: Participation in sports, where O indicates No and 1 indicates Yes.

Music: Participation in music activities, where O indicates No and 1 indicates Yes.

Volunteering: Participation in volunteering, where O indicates No and 1 indicates Yes.

StudyTimeWeekly: Weekly study time in hours, ranging from 0 to 20.

Absences: Number of absences during the school year, ranging from 0 to 30.

Tutoring: Tutoring status, where O indicates No and 1 indicates Yes.

Methods of Research //

Our hypothesis is that students who receive regular parental help with schoolwork will

have higher academic performance scores than those who do not, and this effect may

be moderated by many demographic variables.

Parental support & parental education graph

ParentalSupport

parental_support

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d 🔳	2392	100%
matched	0	0%
sing 📕	0	0%
an	2.12	
Deviation	1.12	
Intiles	0	Min
	1	25%
	2	50%
	3	75%
	4	Max

parental_education



Valid	2392	100%
Mismatched	0	0%
Missing	0	0%
Mean	1.75	
Std. Deviation	1	
Quantiles	0	Min
	1	25%
	2	50%
	2	75%
	4	Max

Parental Support and education averages

Average for GPA 4-3.5 Average for GPA 3.5-3.0 Average for GPA 3.0-2.5 Average for GPA 2.5-2.0 Average for GPA 2.0-1.5 Average for GPA 1.5-1.0 Average for GPA 1.0-0

Education

2.623376623 2.767346939 2.662337662 2.752427184

2.76056338 2.794736842 2.764957265 2:818181818 2:432653061 2:150649351 2:138349515 2:220657277 2:039473684

Support

1.786324786

Conclusion

By looking at averages of Parental involvement and parental education, we can conclude that parental involvement and education does not correlate with a student's GPA. For parental education, no matter what the GPA was, all of the average values were between 2.6 & 2.8. For Parental involvement, there was a steady decrease as the GPAs ranges went down, but the decrease was small so we decided it wasn't relevant enough to support our hypothesis. We connected this to equality because it shows that you can be independent from your parents' education. Unfortunately, not everyone is born with equal parents but we think that this data shows despite that, that anyone can succeed if they put effort into their work.