

Student dropout analysis based on previously acquired educational achievements: A case of the University of Portalegre

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Abstract

In the world of education, the path to success is often visualized as a linear progression, where students follow a predefined journey from kindergarten to graduation. However, the reality is far more complex. Various reasons lead students to choose to deviate from this path. These students have encountered different challenges, circumstances, or a lack of proper resources that have led them to drop out of university.

In this dataset provided to us, we will delve deeper into understanding the reasons why students have dropped out of the university, based on the data at our disposal. We will leverage our social knowledge to comprehend the factors that influenced their decision to drop out and work to prevent such occurrences if the issues are within the university's purview. Our goal is to offer solutions, support, and the necessary resources to facilitate students' educational journeys. We will also use the analysis we've conducted on the dropout students to learn from their experiences and chart a unique educational pathway with fewer dropouts.

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*, Rīga Technical University

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Exploratory Data Analysis

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We can see that the points for the 1st semester and 2nd semester are correlated which shows that one's marks are primary drivers of success and exhibit sizeable correlations

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Index(['Marital status', 'Application mode', 'Application order', 'Course',
      'Daytime/evening attendance\t', 'Previous qualification',
      'Previous qualification (grade)', 'Nationality',
      'Mother's qualification', 'Father's qualification',
      'Mother's occupation', 'Father's occupation', 'Admission grade',
      'Displaced', 'Educational special needs', 'Debtor',
      'Tuition fees up to date', 'Gender', 'Scholarship holder',
      'Age at enrollment', 'International',
      'Curricular units 1st sem (credited)',
      'Curricular units 1st sem (enrolled)',
      'Curricular units 1st sem (evaluations)',
      'Curricular units 1st sem (approved)',
      'Curricular units 1st sem (grade)',
      'Curricular units 1st sem (without evaluations)',
      'Curricular units 2nd sem (credited)',
      'Curricular units 2nd sem (enrolled)',
      'Curricular units 2nd sem (evaluations)',
      'Curricular units 2nd sem (approved)'])
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