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Simulate the career of students attending Politecnico

Questions

What is the graduation mark

3180

Years to graduate

30 Q0

Evaluate the graduation time and the final grade for the laurea for a MSc course

A = 00

What is the average time to complete the degree?

3 15 PO

What factors influence the graduation time of the students

31780

how many students will pass the exam depending of their % of assistance?

3280

What are the factors that contribute to a faster academic progress at Polito?

36 PO

Depending on the type of enrollment (part time/ full time) and the type of degree (think of 5 categories) what is the average number of years to graduate in a masters degree?

B 12 80

What is the comparison of time and mark among different degrees?

B3 80

What is the comparison of time and mark among different degrees?

3180

Which are the subjects that slow more the academic achievements of a student in a particular degree?

3680

How many students were not able to get the degree?

32 Po

What factors impact the success in academics?

3180

How long does it take for a student to graduate?

A100

How does the course statistics influence student's performance?

3782

How do various academic activities influence the students career

3280

what is the probability of dropping out

3480

What is the average grade for each student, and on average how many tries it takes them to pass each exam?

3180

3000

Does the economical situation contribute to the student's performace?

Stochastic elements

number of subjects to be cleared

3080

preparation for an exam

3180

number of exams taken for each session

3280

accept/no accept of an exam based on the proposed grade

3180

pass/no pass according to a Bernoulli experiment

3280

grade distribution

A2 80

statistics of passing an exam, taken from the course website

B 12 80

Financial ability of the student

3080

Extracurricular Activities

35 PO

The randomness in passing an exam when the student is not prepared and viceversa, not passing an exam when the student is prepared.

A2 DO

Votes distribution for the subjects

3080

1. Type of degree 2. The ability of the student (proxy for it maybe the grades?) 3. Financial/ economic background (proxy for it maybe Isee?) 4. years spent on the previous degree (given this is a master's let's say).

B 10 80

How much are exams hard

3480

student characteristics

3180

students' demographics

3080

social and economic

factors

The probability of success per exam

B3 P0

programs level of difficulty

B380

Number of calls attended

3080

Input parameters

total number of courses (of the degree)

3180

Grade distribution from past

3080

Number of sessions per year

3080

probability of passing the exam

3180

probability of accepting a grade

A101

maximum and minimum number of exams taken for each session

3080

Create a input for each course and the probability of passing and accepting the score by the students

30 PO

total number of students

3180

Historical data

Accuracy on the average

3080

30 PO

average number of exams to be taken during each session

3180

seed 30 Po Output metrics An

average graduation time

3080

average graduation grade

3080

Graduation grade distribution

3180

average number of attempts taken to graduate

3080

grade according to the time of graduation

3080

Graduation time distribution

3180

Statistics regarding pass/no pass and grade distribution for each course

3180

Analysis

graduation time vs probability of failure

30 DO

The average delay of declining a grade on the graduation time

3000

Relation between the graduation time and the final GPA.

30 Po