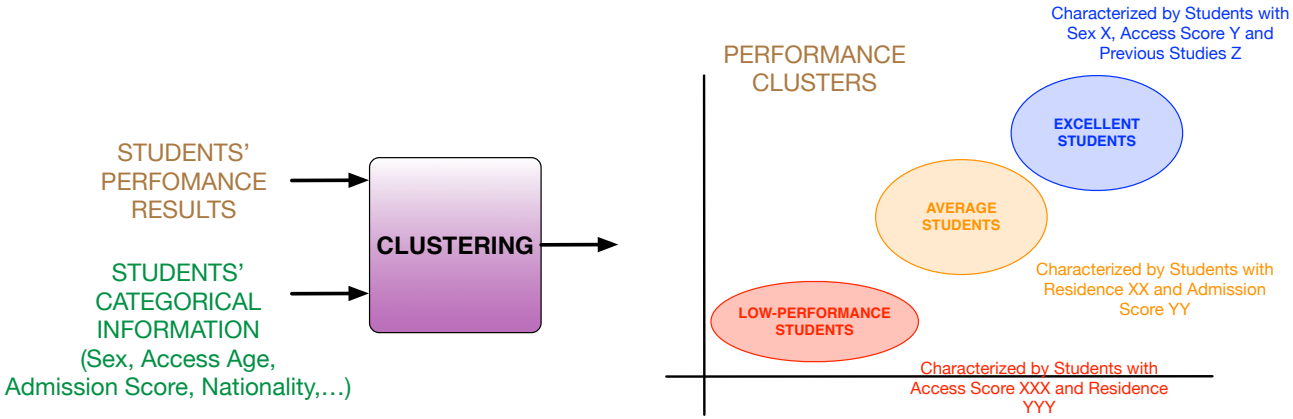
Algorithms for Student data processing

Dr. Jose Lopez Vicario,
Profesor Agregado – Universidad Autónoma de Barcelona (UAB)

SPEET has developed two Data Processing Tools:

1. Clustering/Classification Tool:



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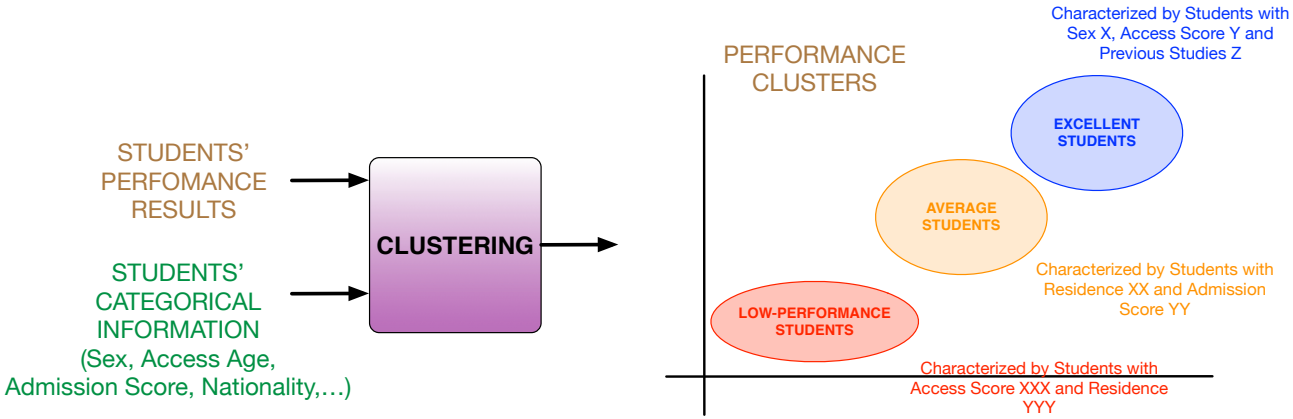
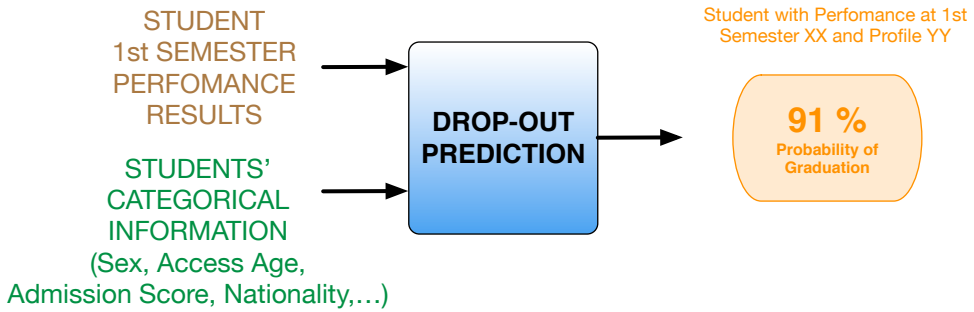
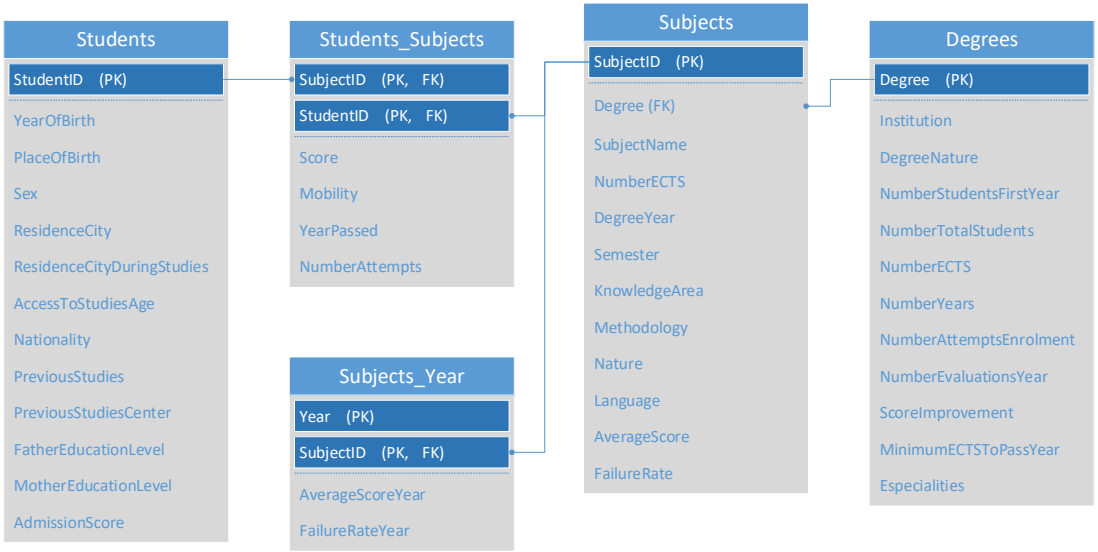


2. Drop-out Prediction Tool:



SPEET Unified Data Format



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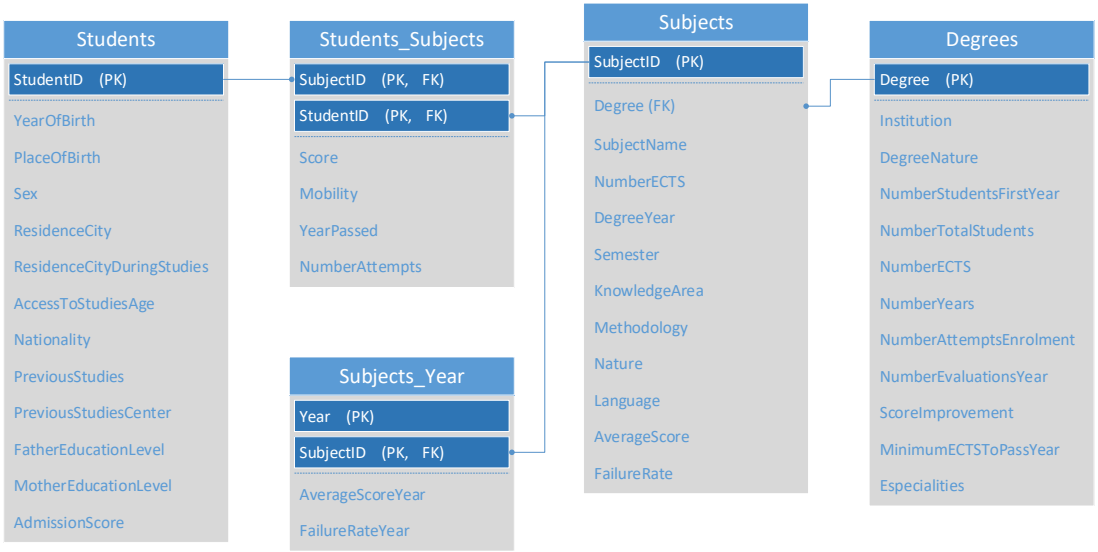

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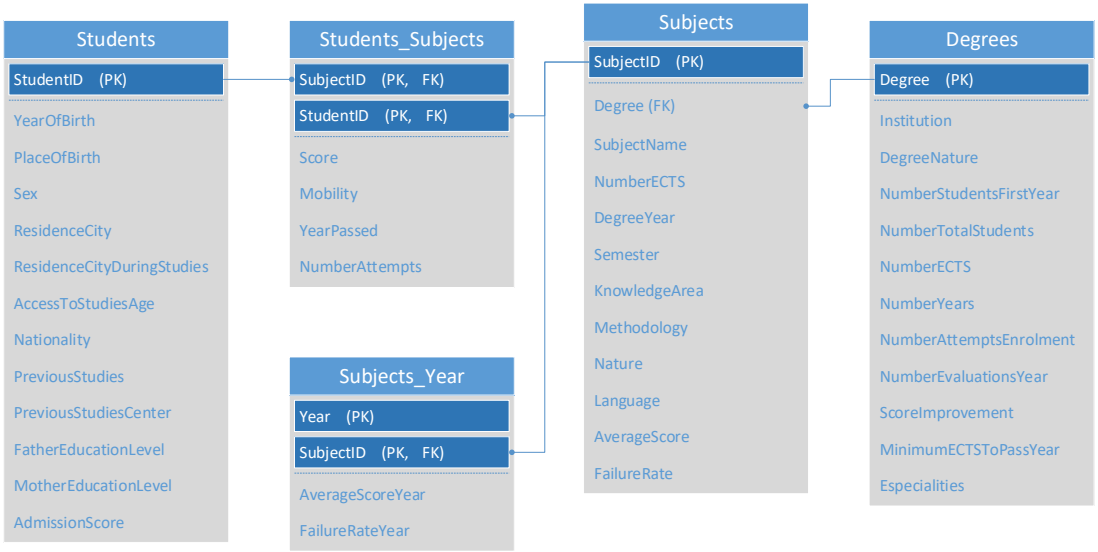

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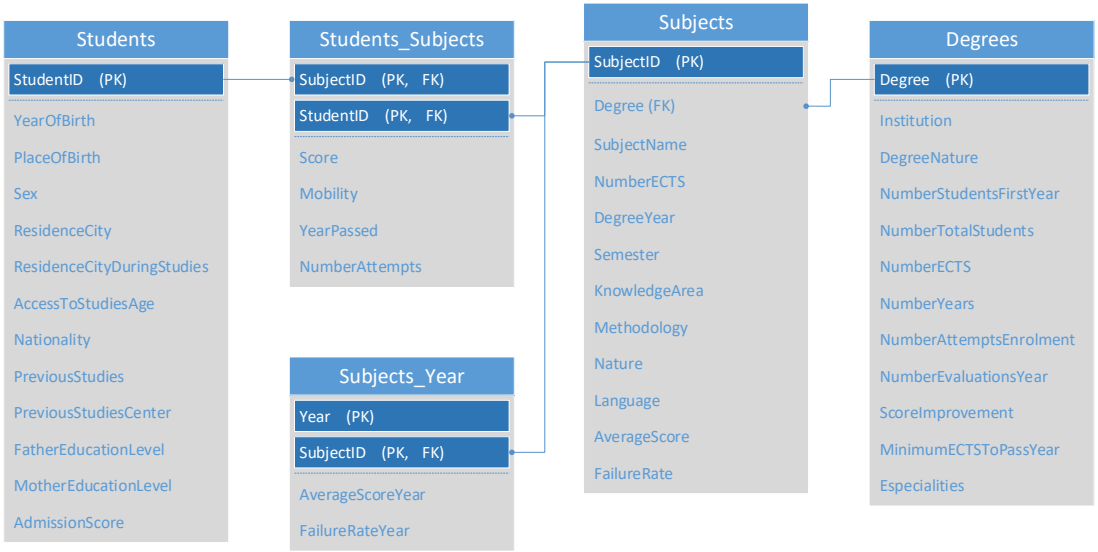

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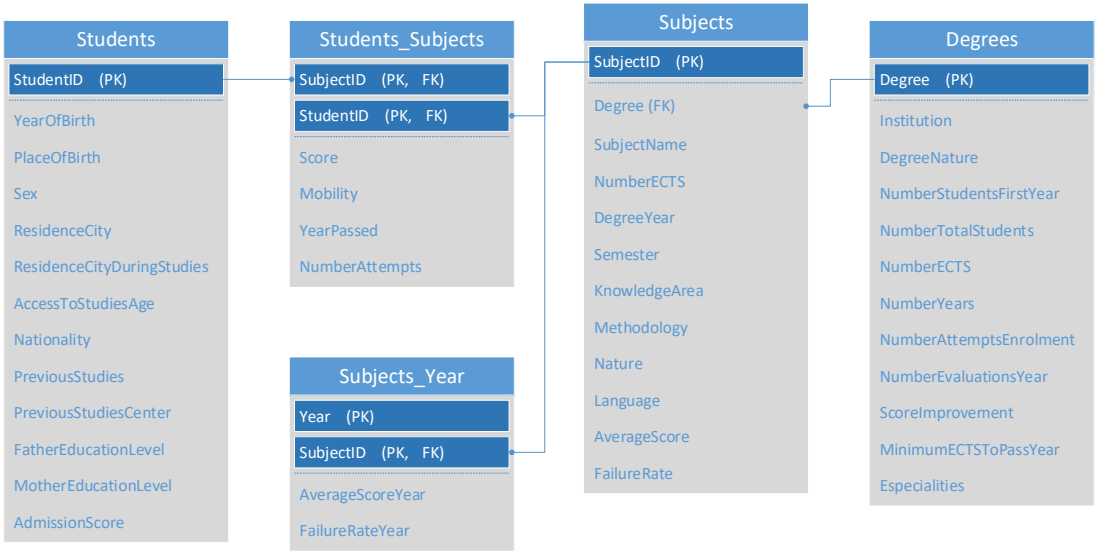

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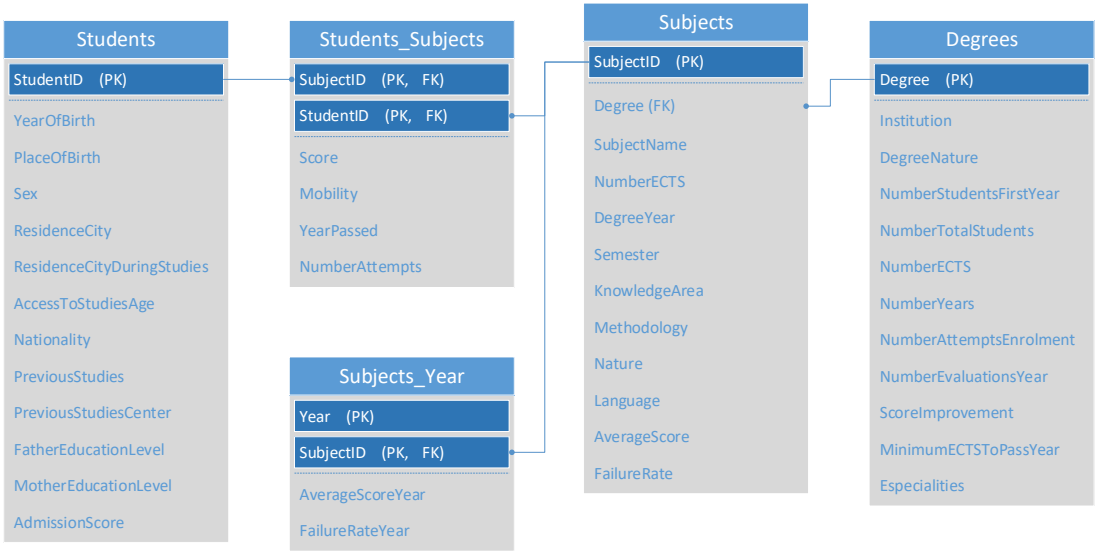

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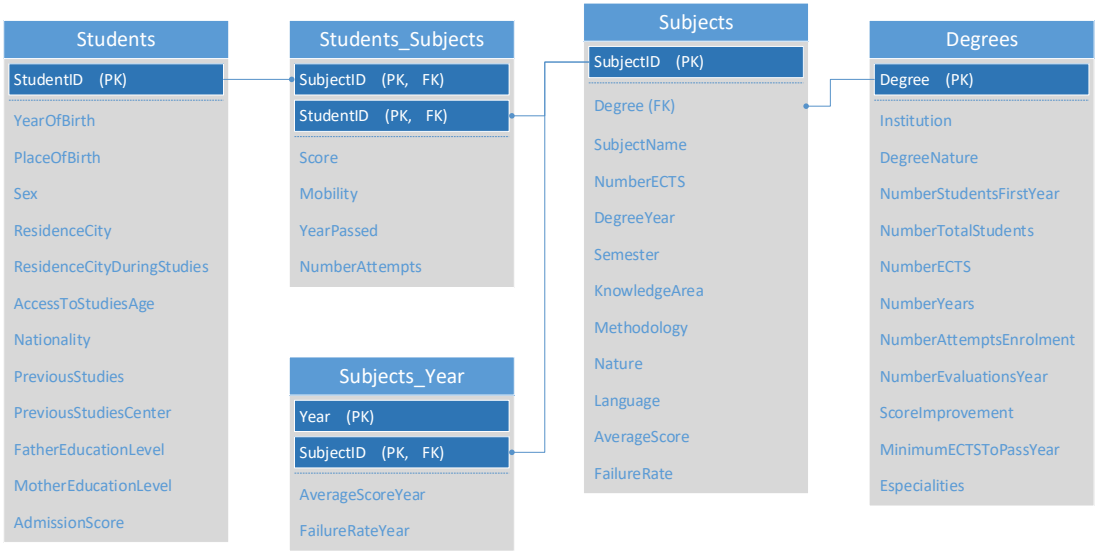

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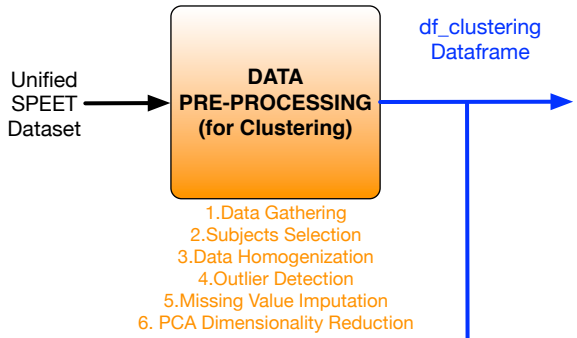
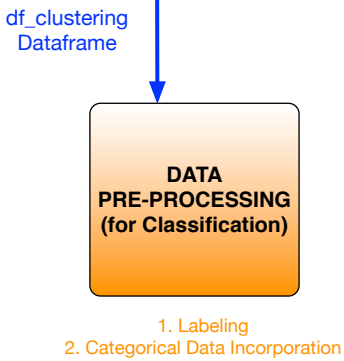
ONLY 6 PARTNERS FROM 4 COUNTRIES !!!!!

Clustering/Classification Tool



Student	Subj 1 Score	Subj 2 Score	...	Subj M Score	Sex	Access Age	Previous Studies	Admission Score	Nationality
1	8	8	...	5	M	20	Secondary	5	FR
2	6	6	...	5	F	18	ProfessionalStudies	7	SPA



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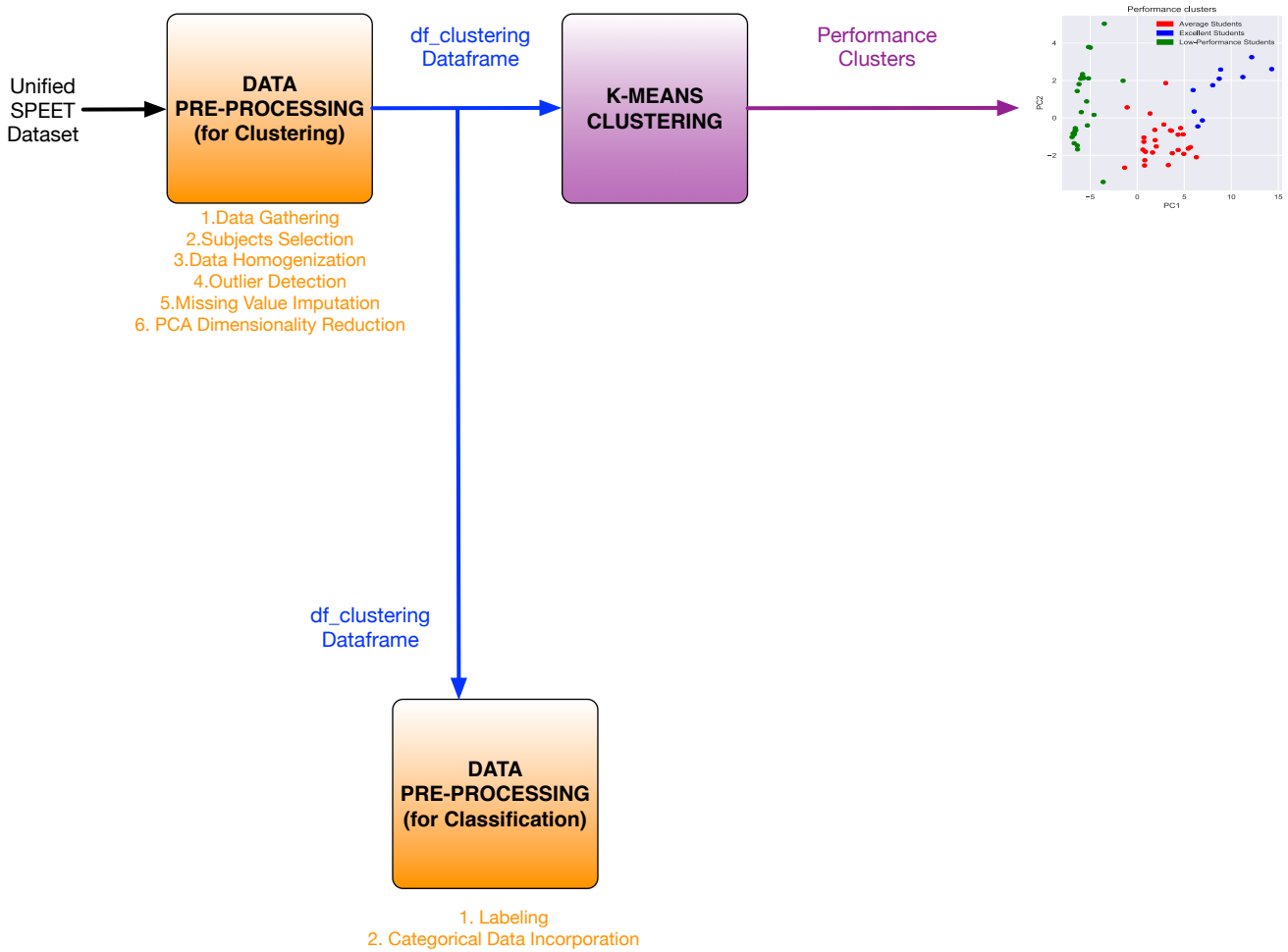

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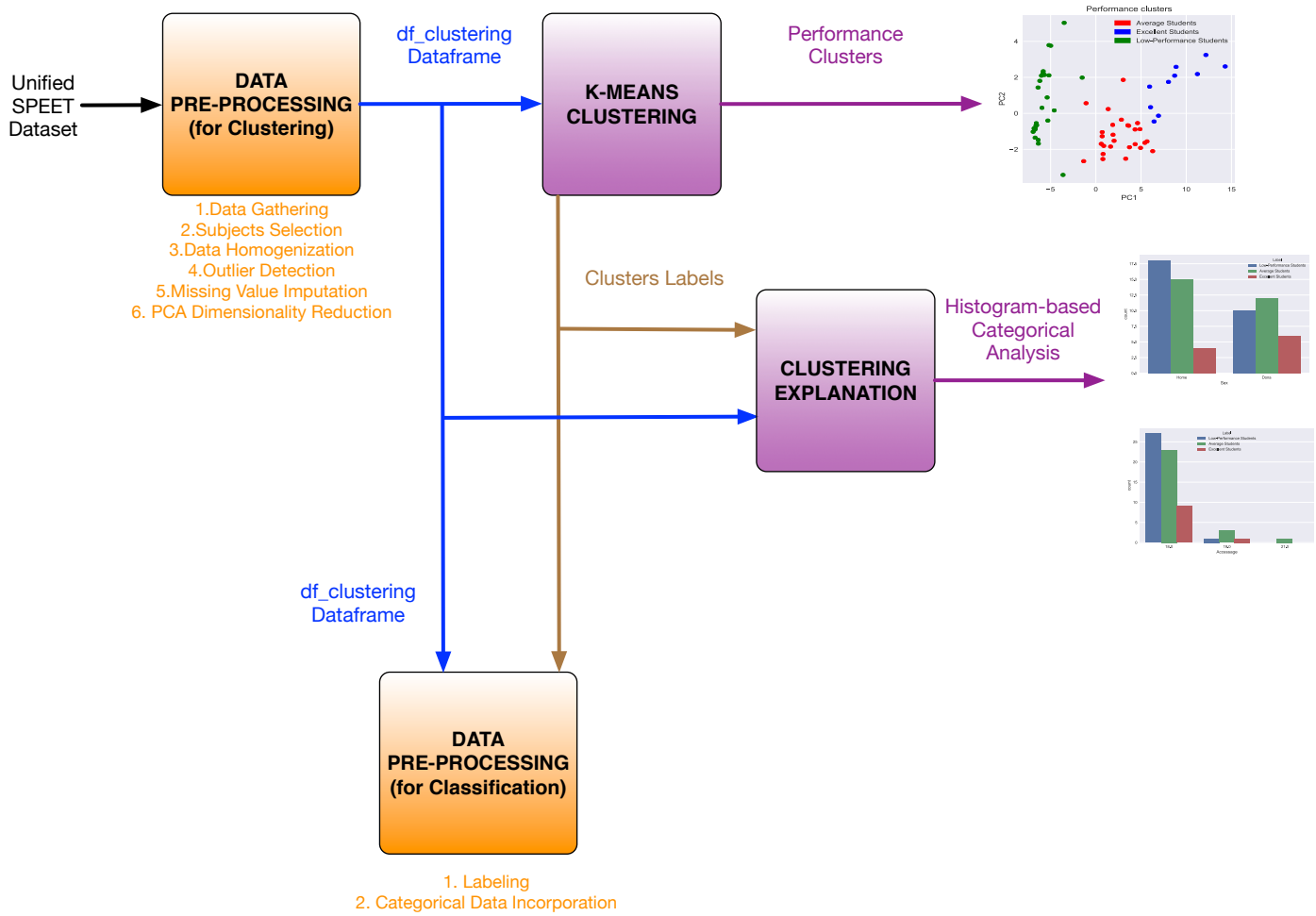

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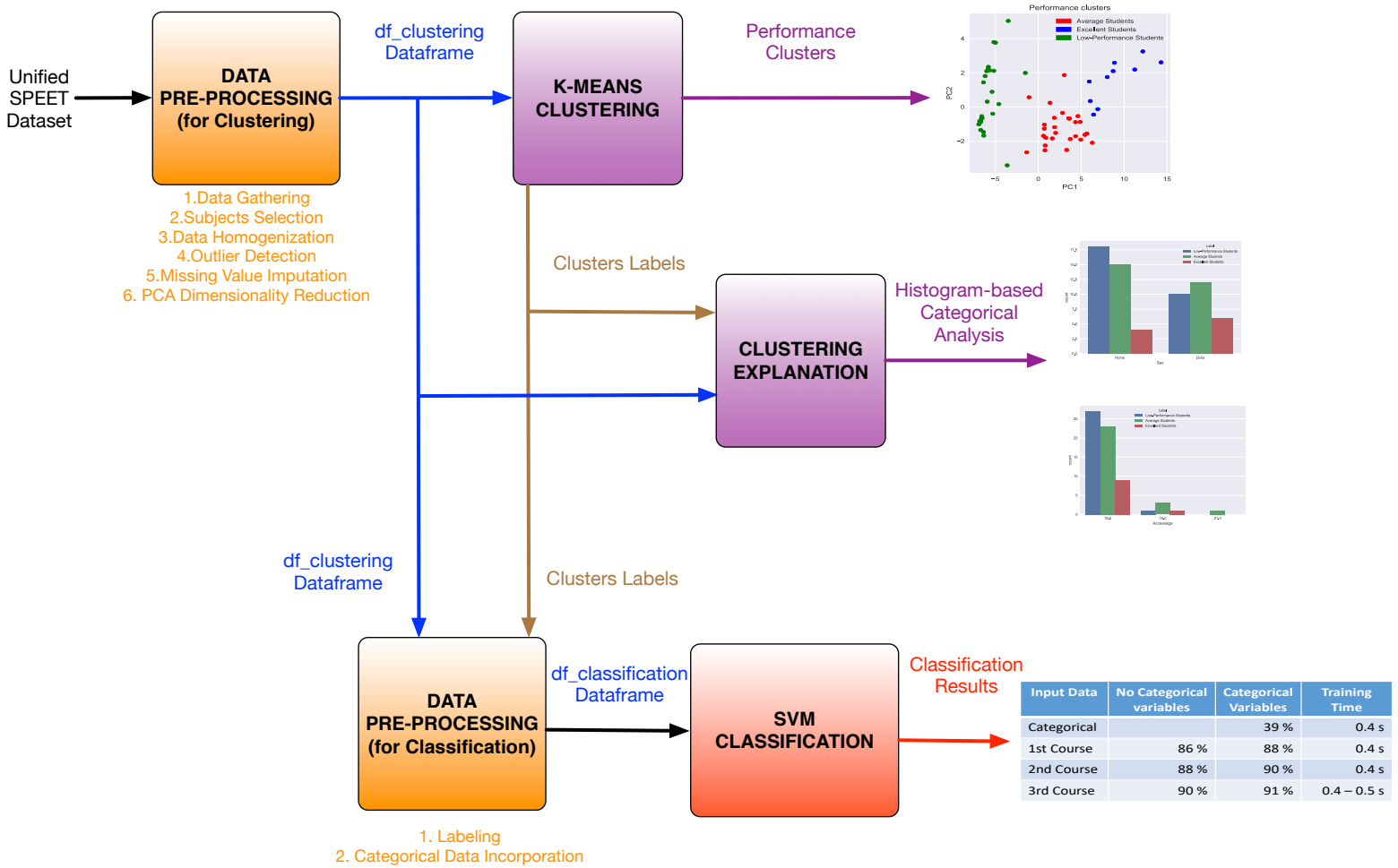
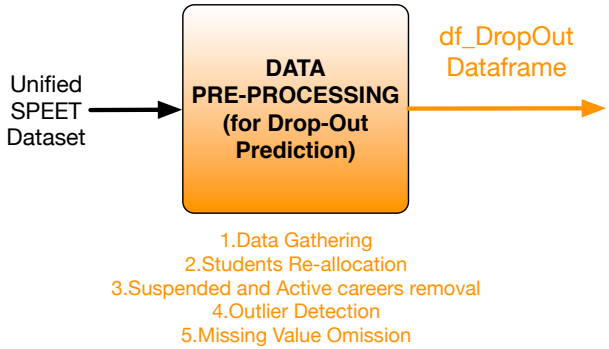


Input Data	No Categorical variables	Categorical Variables	Training Time
Categorical		39 %	0.4 s
1st Course	86 %	88 %	0.4 s
2nd Course	88 %	90 %	0.4 s
3rd Course	90 %	91 %	0.4 – 0.5 s

Drop-out Prediction Tool



Student	Sex	Nationality	Previous Studies	Admission Score	Access Age	Weighted Scores Sem1	Average Attempts Exam	ECTS Obtained Sem1	Drop-out
1	M	FR	Secondary	5	20	5	FR	24	NO
2	F	SPA	ProfessionalStudies	7	18	7	SPA	18	YES

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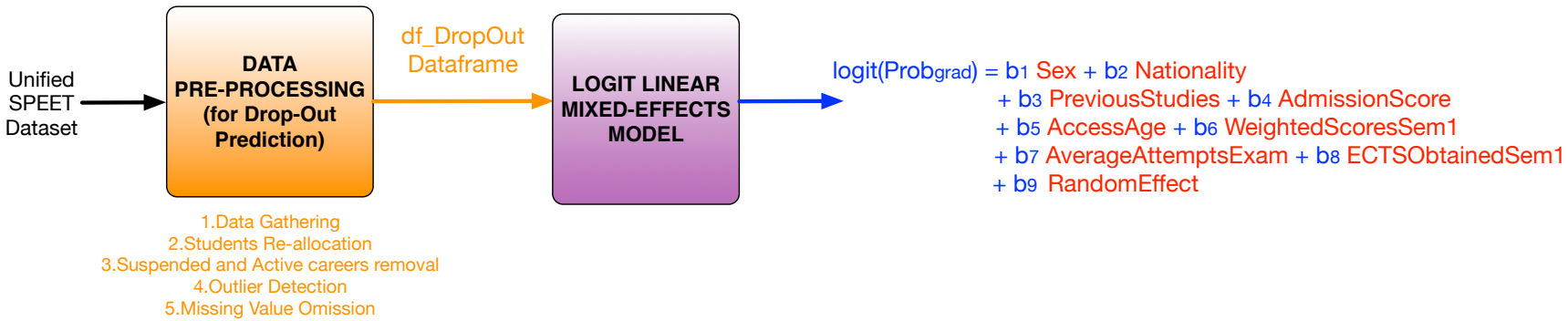

$Prob_{grad}$ > 0.5 is considered as Graduated Student.

Accuracy of the model: 90.87%

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6.Could we see if one or several courses determine the behavior of students at one degree?

Clustering/Classification Tool Demo