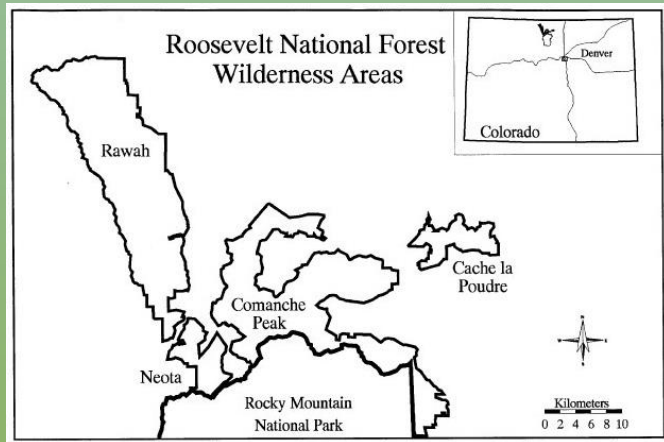




**Y tú, ¿qué tipo de
bosque eres?**

Proyecto de Machine Learning
Bootcamp Data Science | The Bridge School

1. Contexto



Natural Resource
Manager

Roosevelt
National Forest

Inventario de
coberturas
forestales

Terrenos fuera
de jurisdicción

Toma de
decisiones

Predecir el tipo
de cobertura
forestal



Viabilidad del agua en el suelo



Observar: Impacto del clima en la naturaleza



Documentar el cambio en la vegetación



Reconstruir la vegetación previa al asentamiento



¿Y para qué?

2. Clases a predecir

Pino Ponderosa



Álamo/Sauce



Conífera/Abeto



Álamo temblón (Aspen)



Abeto de Douglas

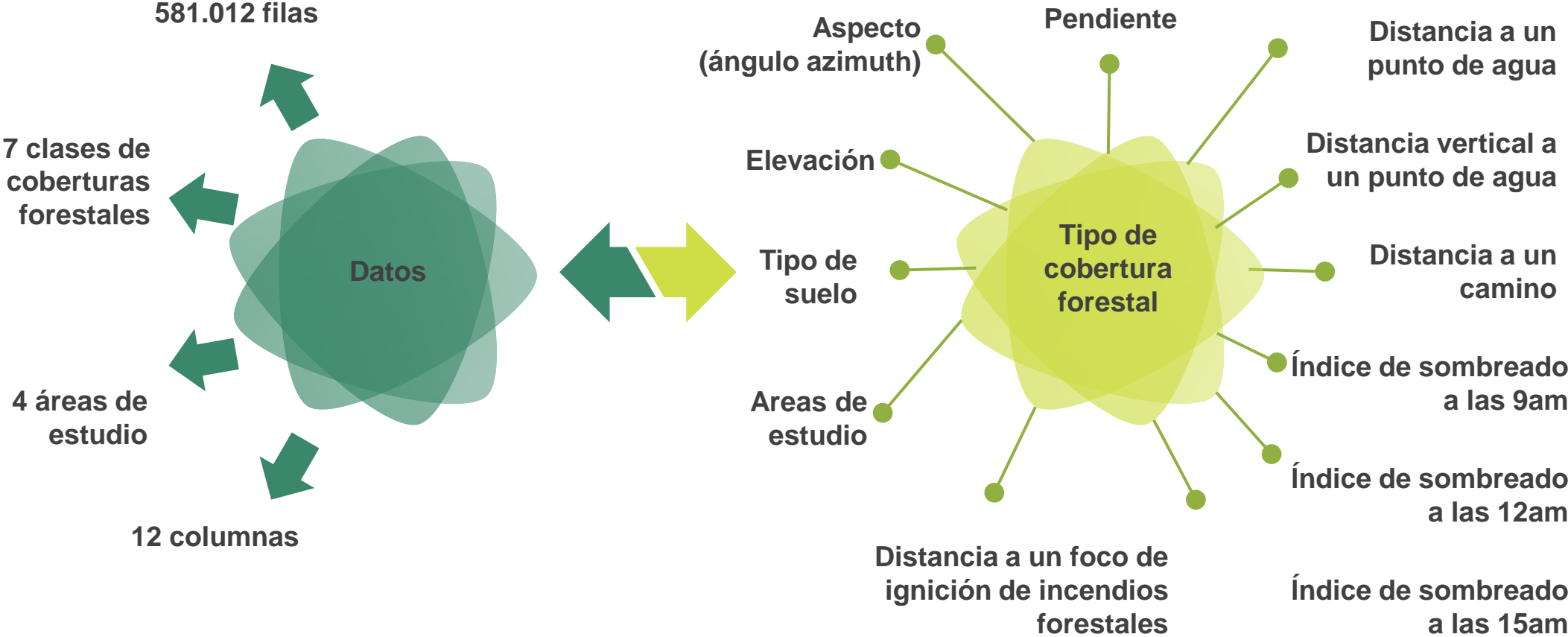


Pino Lodgepole

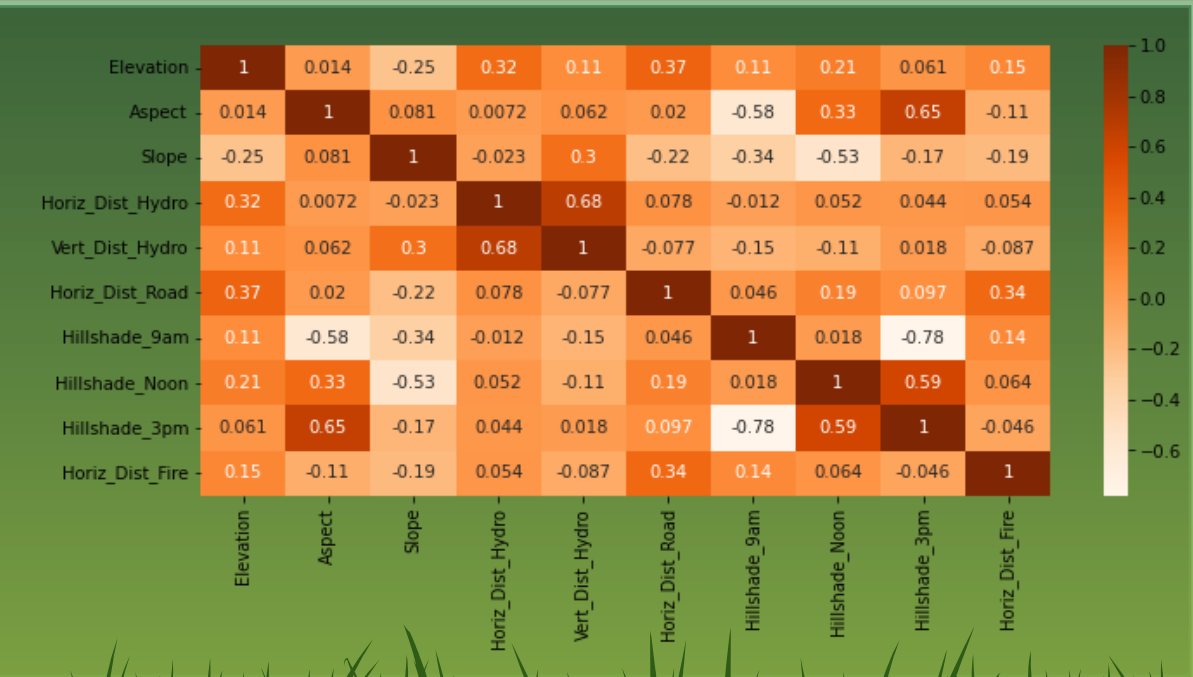
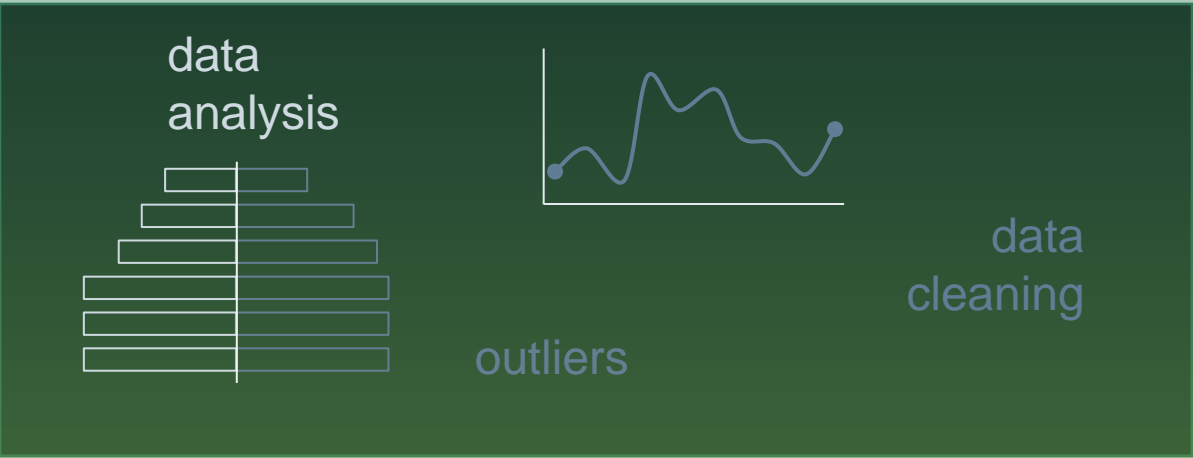


Vegetación atrofiada/deformada (Krummholz)

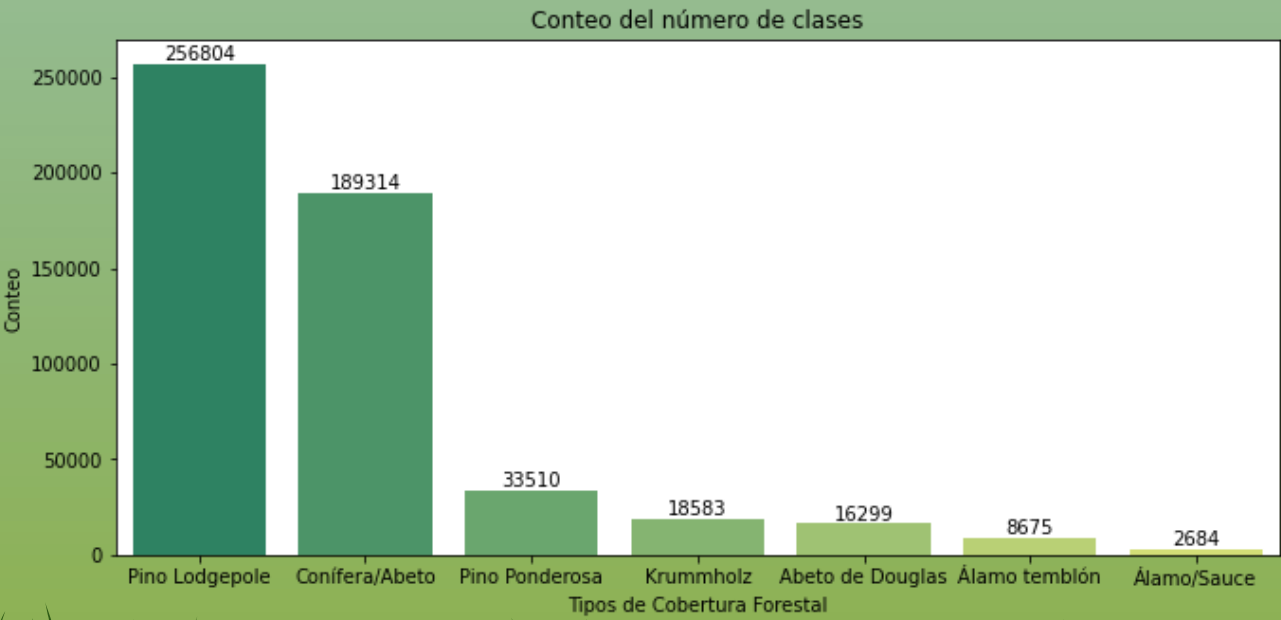
3. Datos



4. EDA

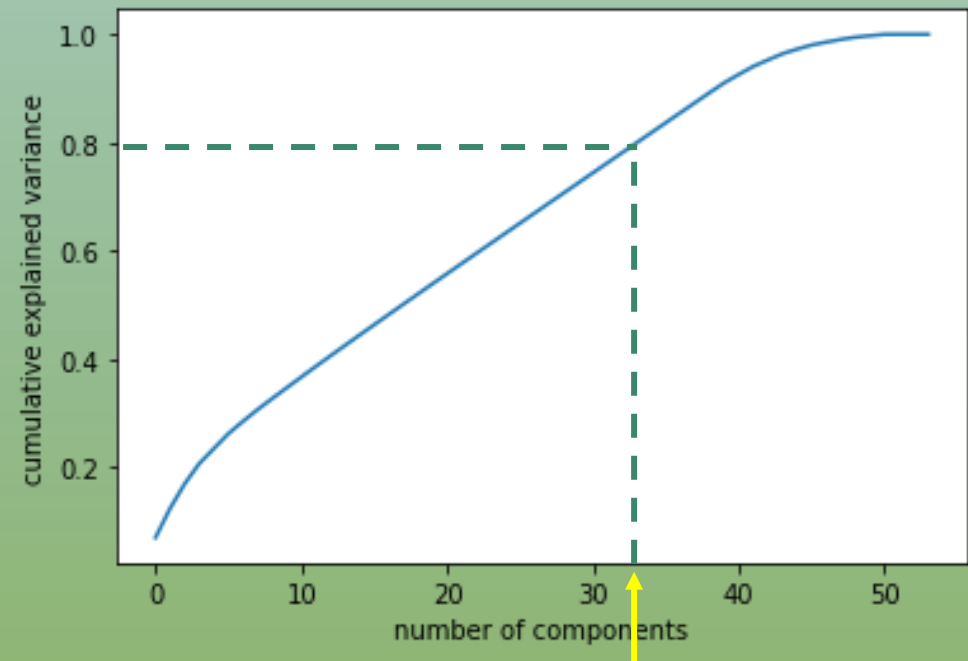


Tipo de cobertura	Código numérico	Conteo
Pino Lodgepole	2	256.804
Conífera/Abeto	1	189.314
Pino Ponderosa	3	33.510
Krummholz	7	18.583
Abeto de Douglas	6	16.6299
Álamo temblón	5	8.675
Álamo/Sauce	4	2.684



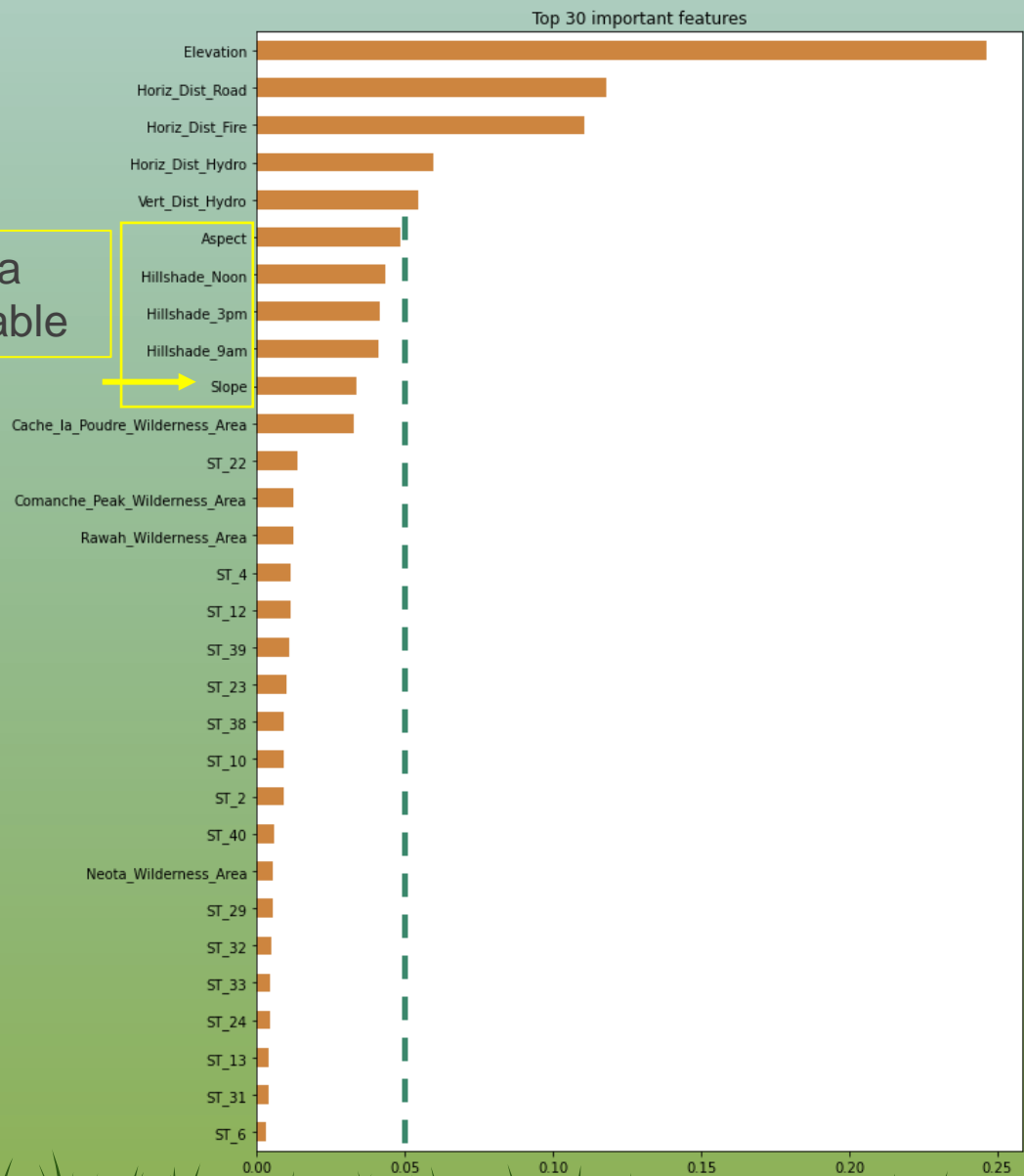
4. Feature engineering | Feature selection

PCA



Elimina
1 variable

Random Forest Selection

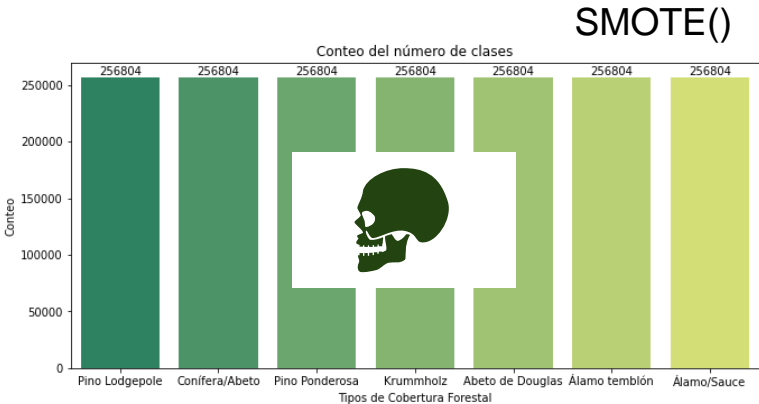
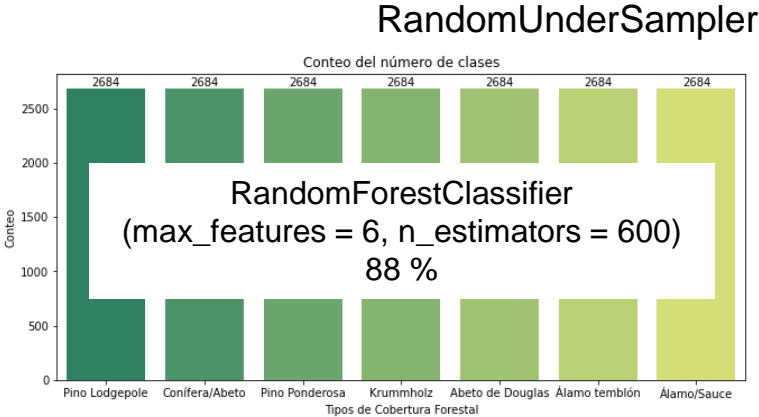
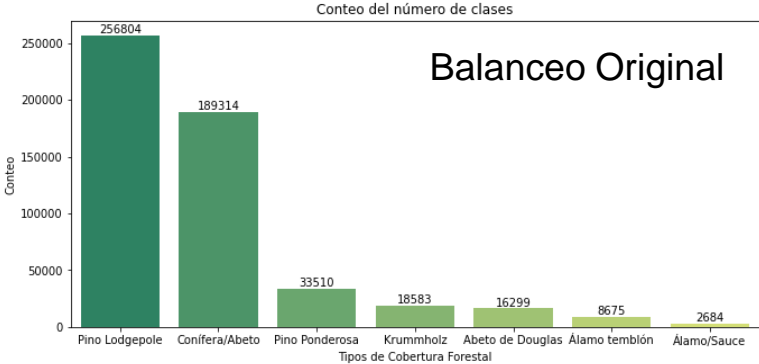


5. Clasificación | Modelos empleados

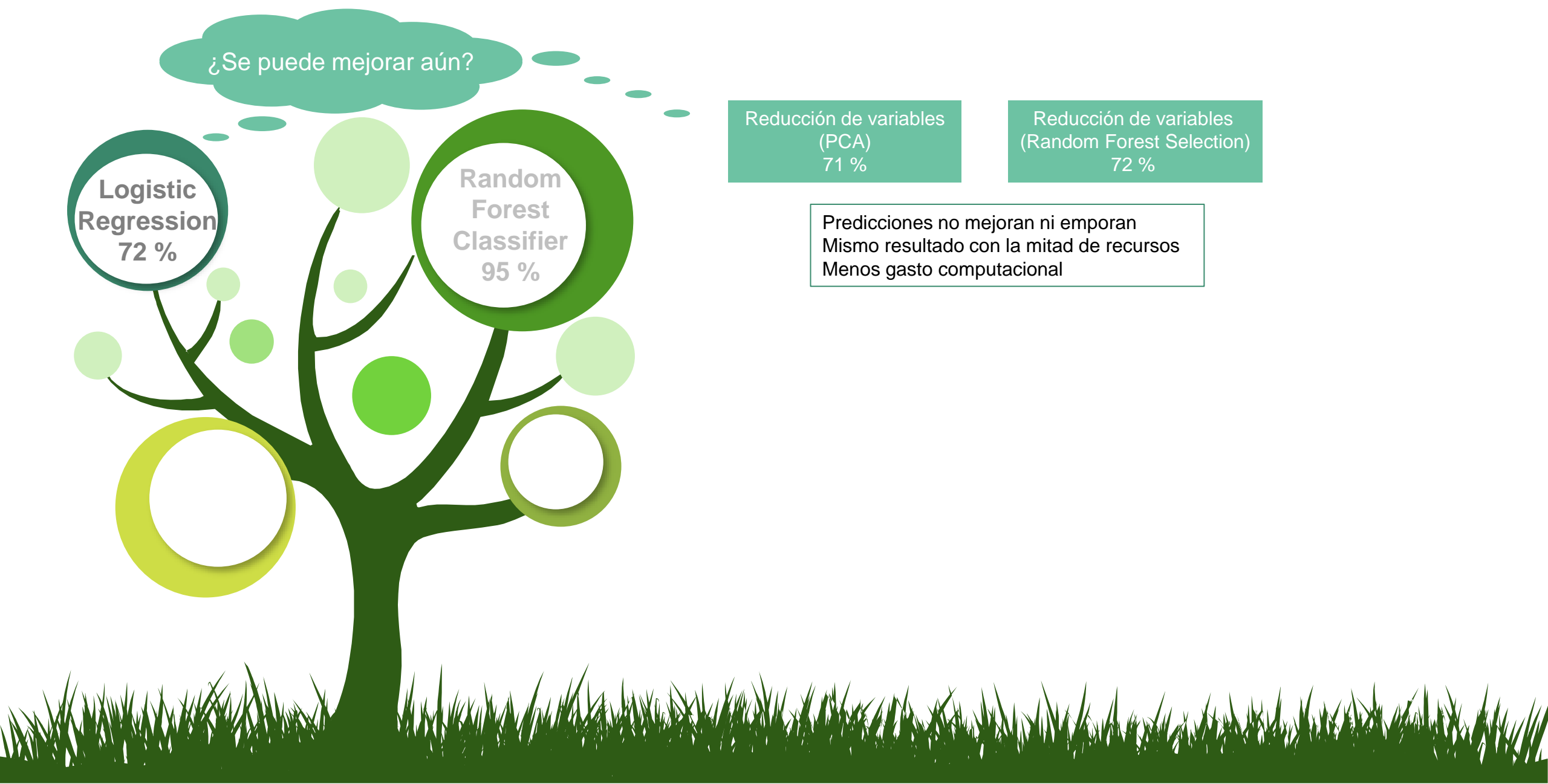


Clase	Cobertura Forestal	Precision	Recall	F1-score
1	Conífera/Abeto	0.96	0.94	0.95
2	Pino Lodgepole	0.95	0.97	0.96
3	Pino Ponderosa	0.95	0.96	0.95
4	Álamo/Sauce	0.90	0.89	0.89
5	Álamo temblón	0.94	0.75	0.83
6	Abeto de Douglas	0.94	0.90	0.92
7	Krummholz	0.97	0.95	0.96

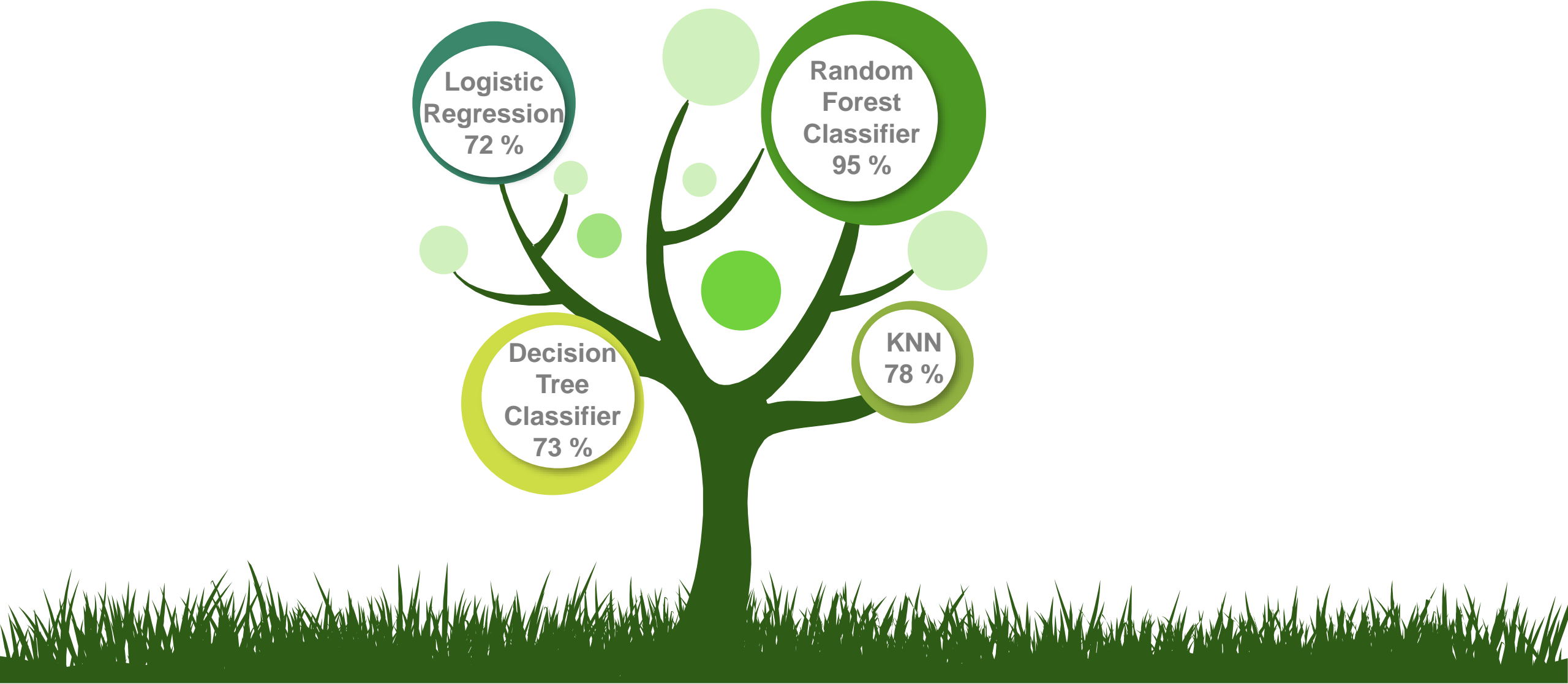
5. Clasificación | Modelos empleados



5. Clasificación | Modelos empleados



5. Clasificación | Modelos empleados



Gracias!



Referencias:

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