



UNIVERSIDAD
NACIONAL
DE COLOMBIA

U.N. Sede Medellín

Facultad de Minas, Trabajo y Rectitud

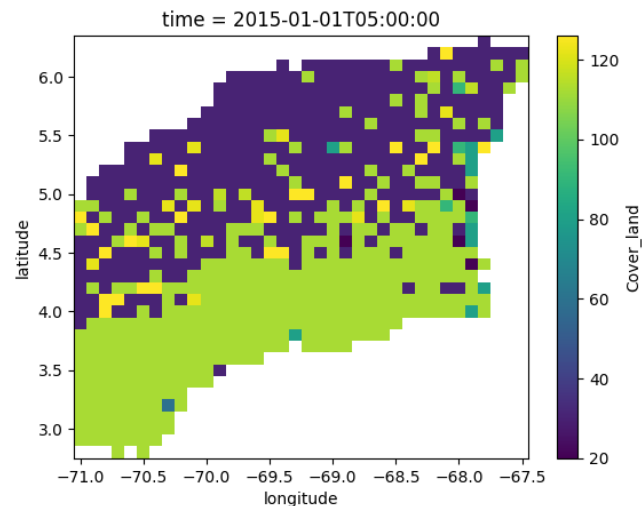
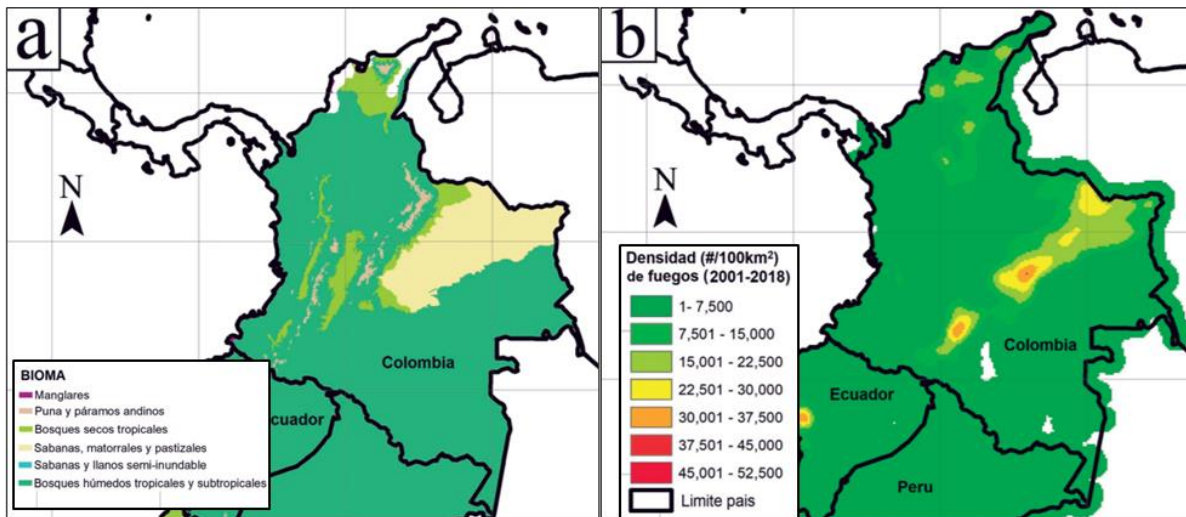
Detección y pronóstico de Incendios forestales

Curso Machine Learning

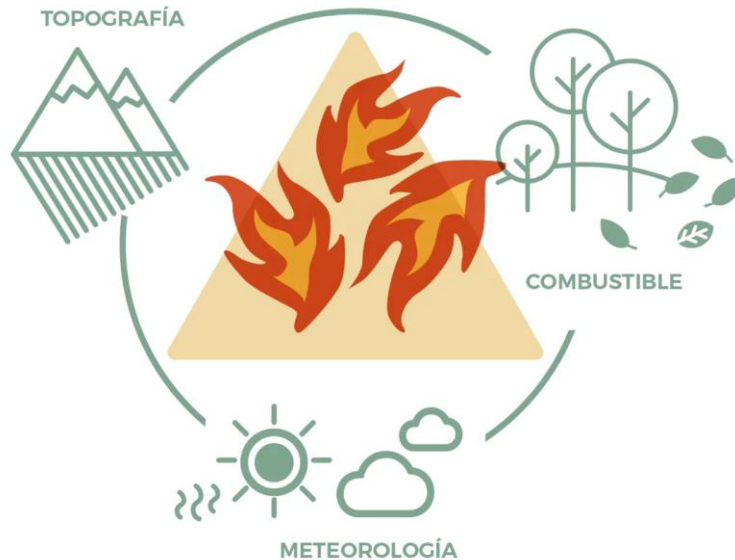
Sebastian Camilo Pachón García

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Introducción



Variables Independientes



Topografía

- Pendiente (slope)



Meteorología

- Temperatura (2mT, soilT, skinT)
- Humedad (soilH)
- Precipitación (pre)
- Evaporación (ev)
- Radiación (rad)

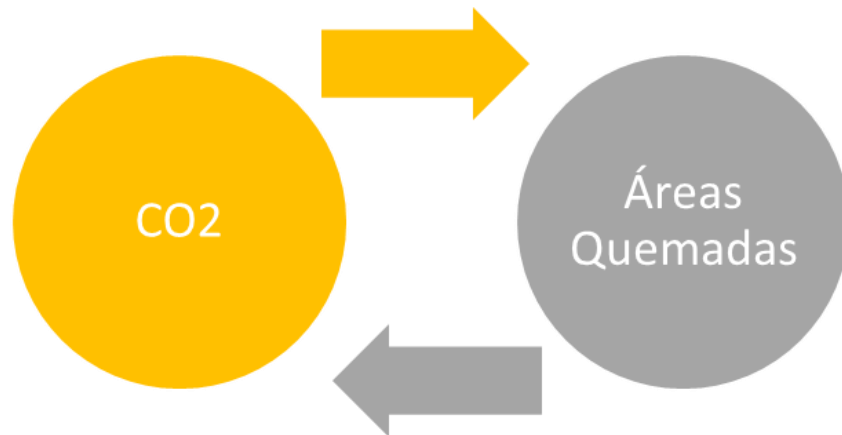


Combustible

- Coberturas (cover)



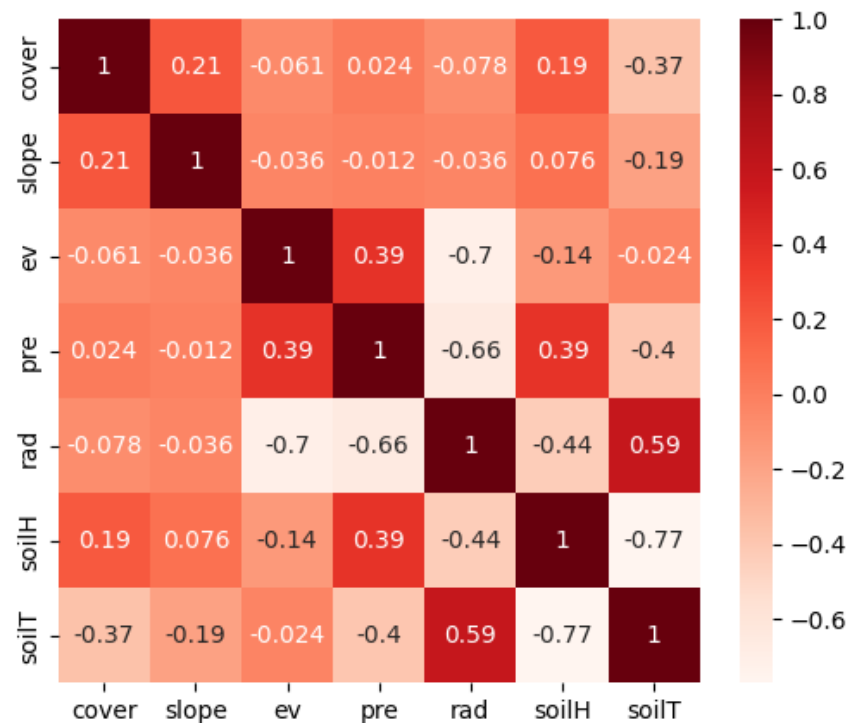
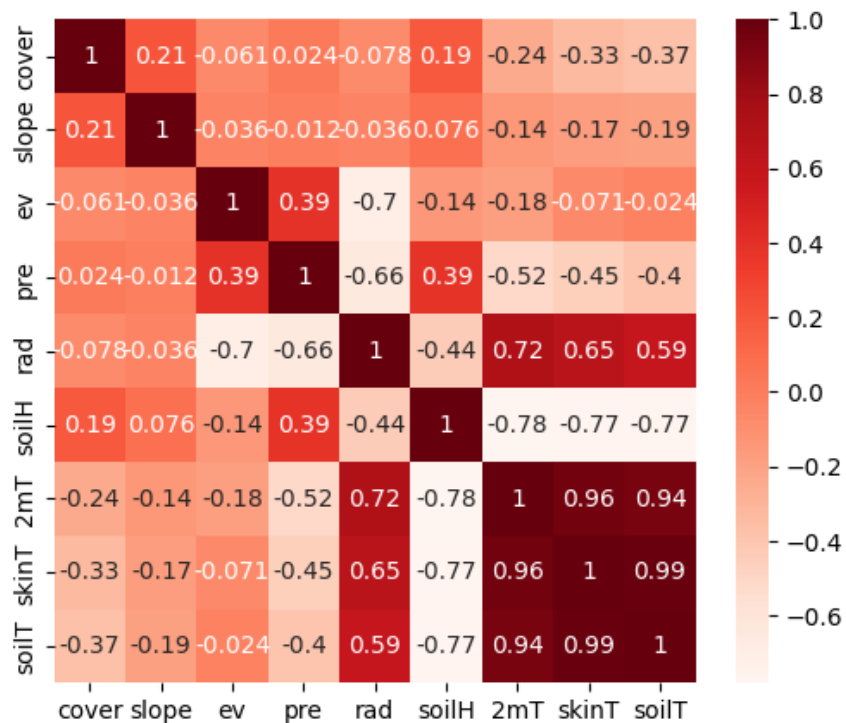
Variable Dependiente

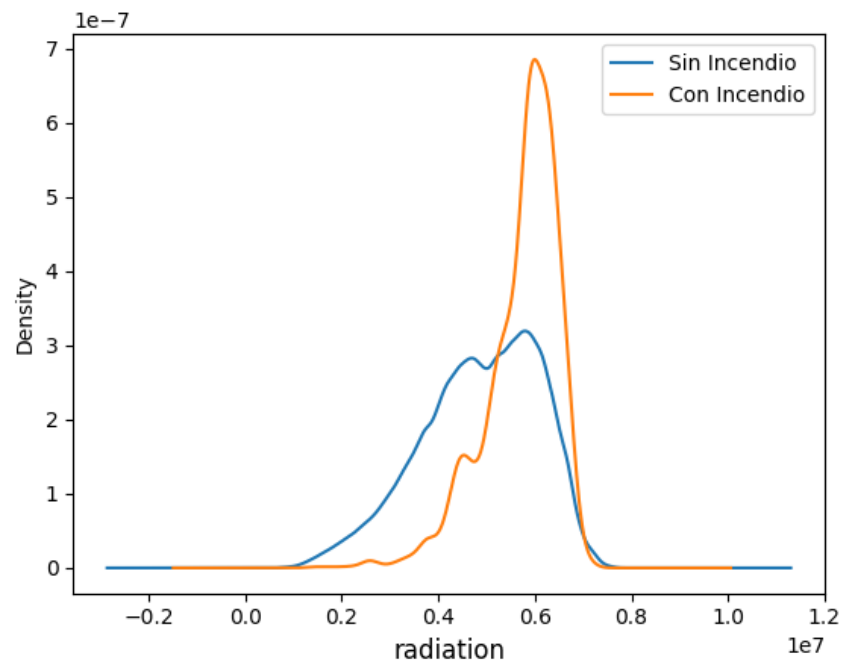


	class	cover	slope	ev	pre	rad	soilH	2mT	skinT	soilT
0	0	30.0	403.50647	-0.001678	1.490116e-08	7159174.5	0.232147	302.67395	303.26575	304.08688
1	0	30.0	250.00381	-0.001923	1.490116e-08	7073021.5	0.215638	302.71222	303.54526	304.51680
2	0	126.0	212.87057	-0.002313	1.490116e-08	7129897.5	0.228749	302.73688	303.11945	304.31485
3	0	30.0	866.94025	-0.001745	1.490116e-08	7096962.5	0.205990	302.64610	303.77133	304.63388
4	0	30.0	367.85410	-0.001276	1.490116e-08	7126602.0	0.218015	302.63174	303.76970	304.32547



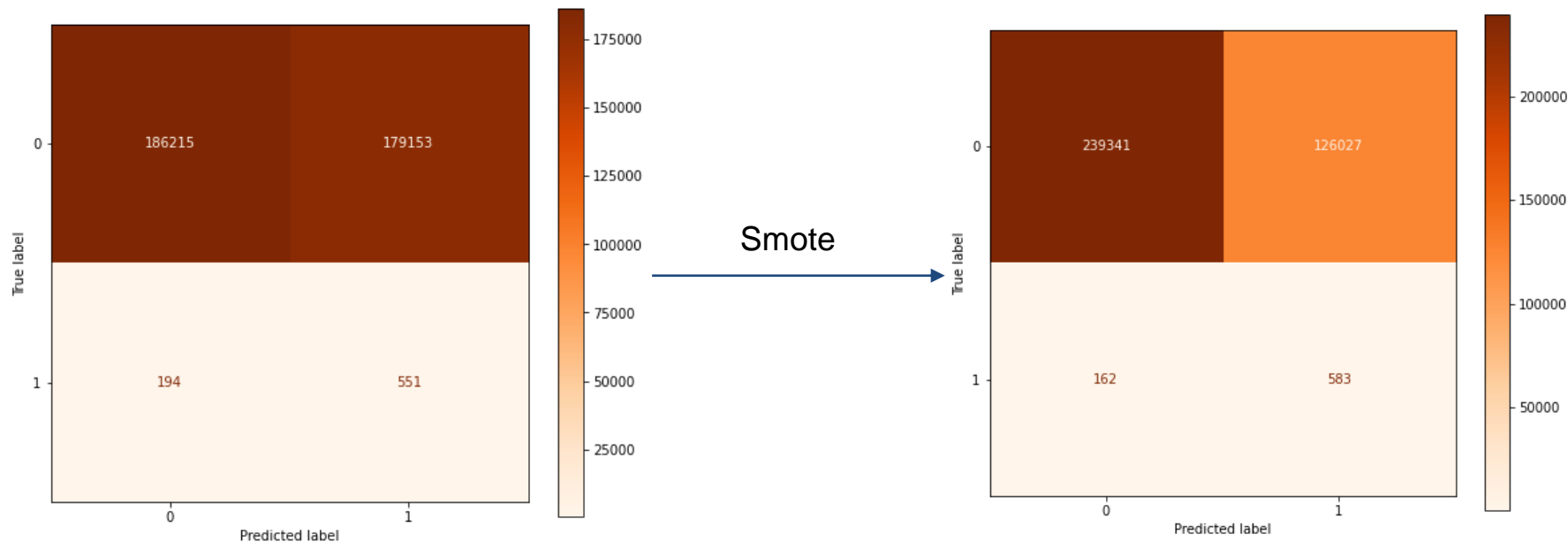
Selección de variables



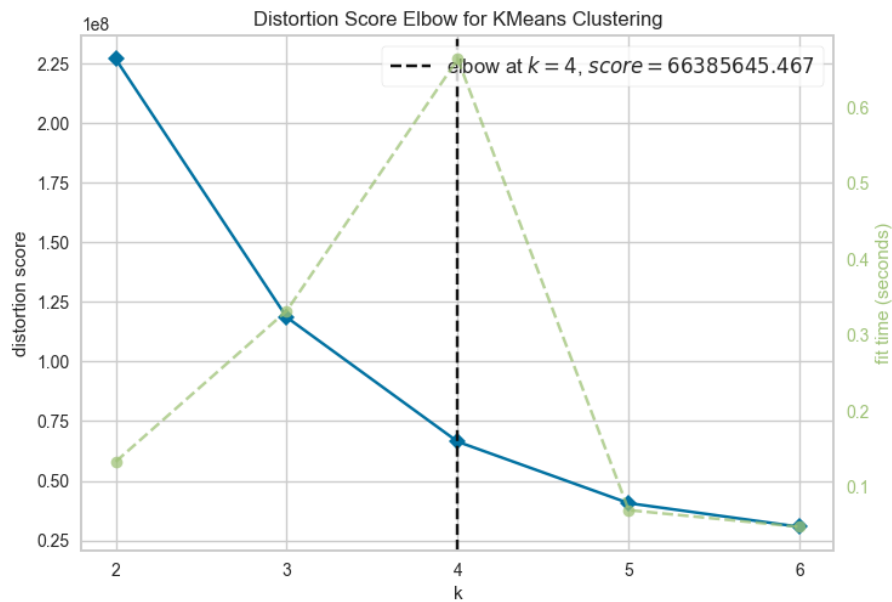
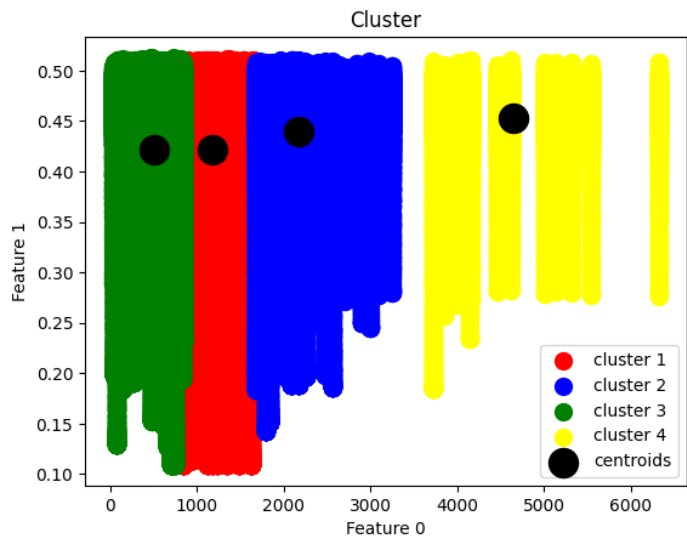


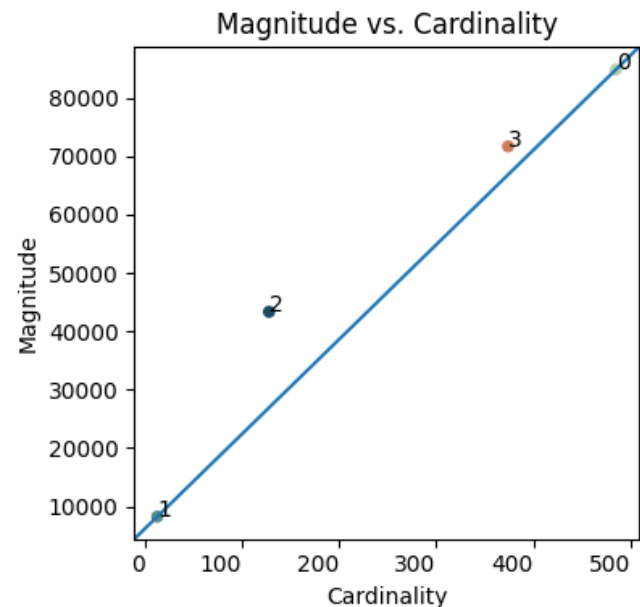
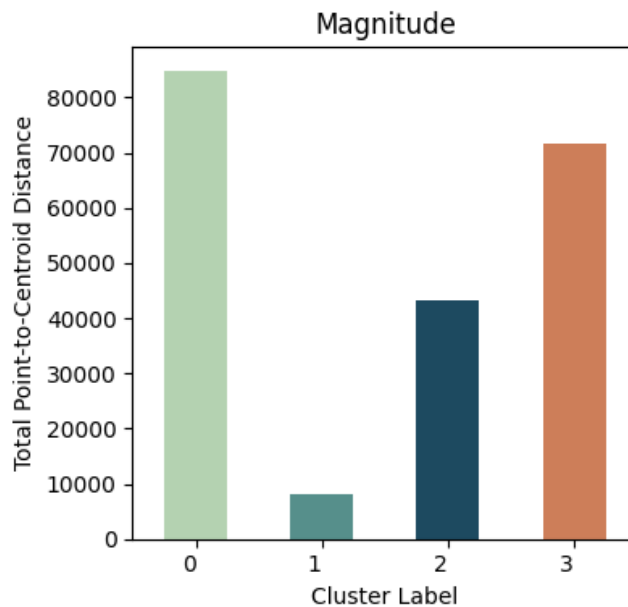
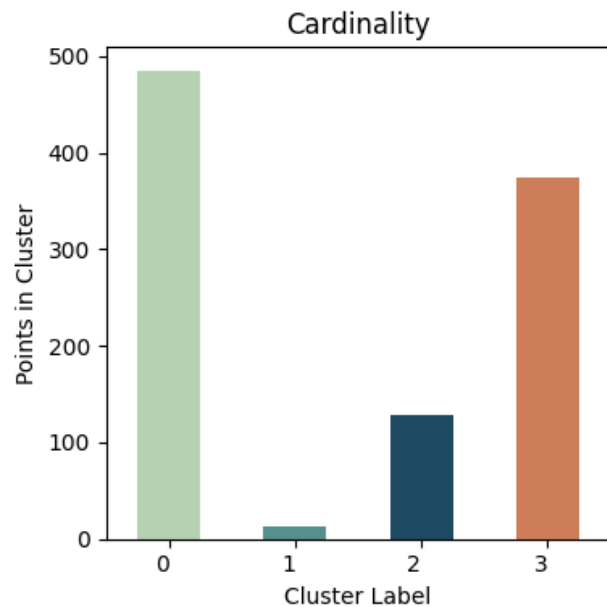
Recursive Feature Elimination (RFE)

Desbalance

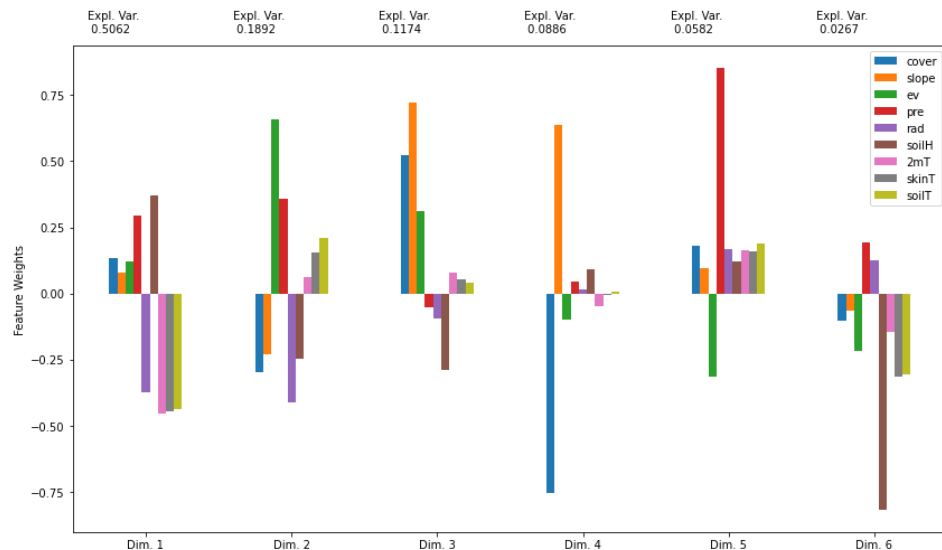
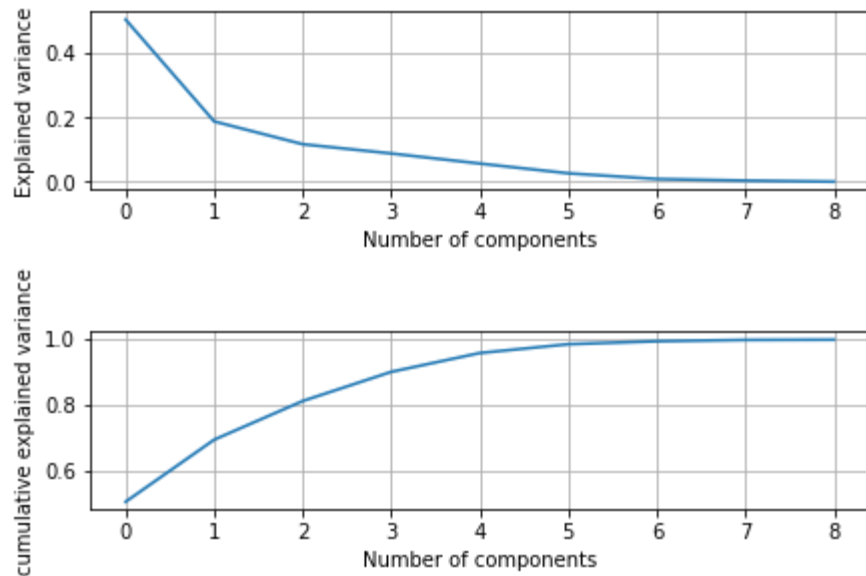


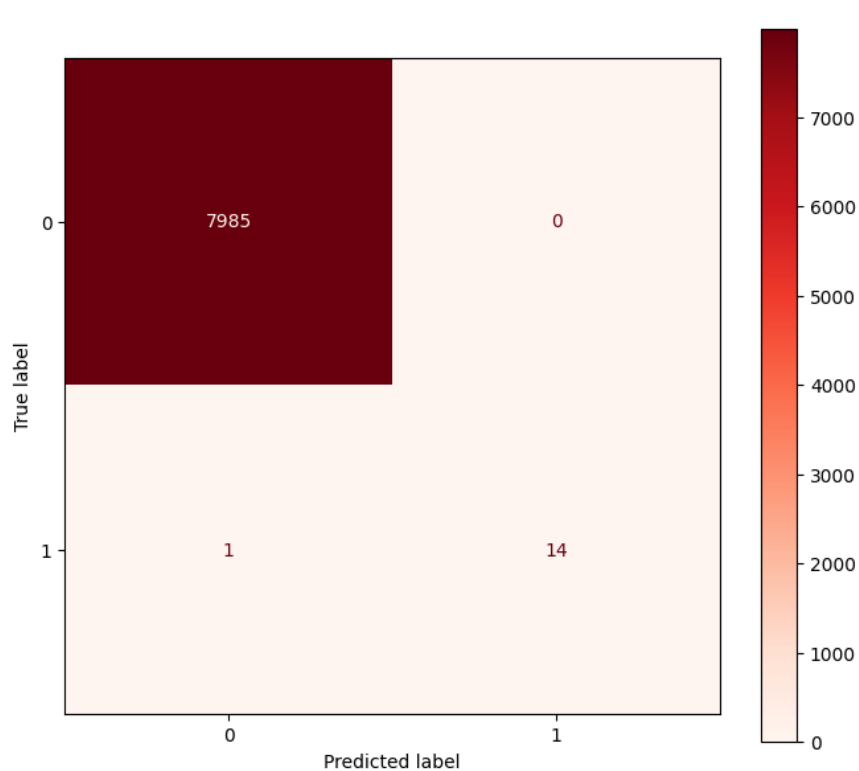
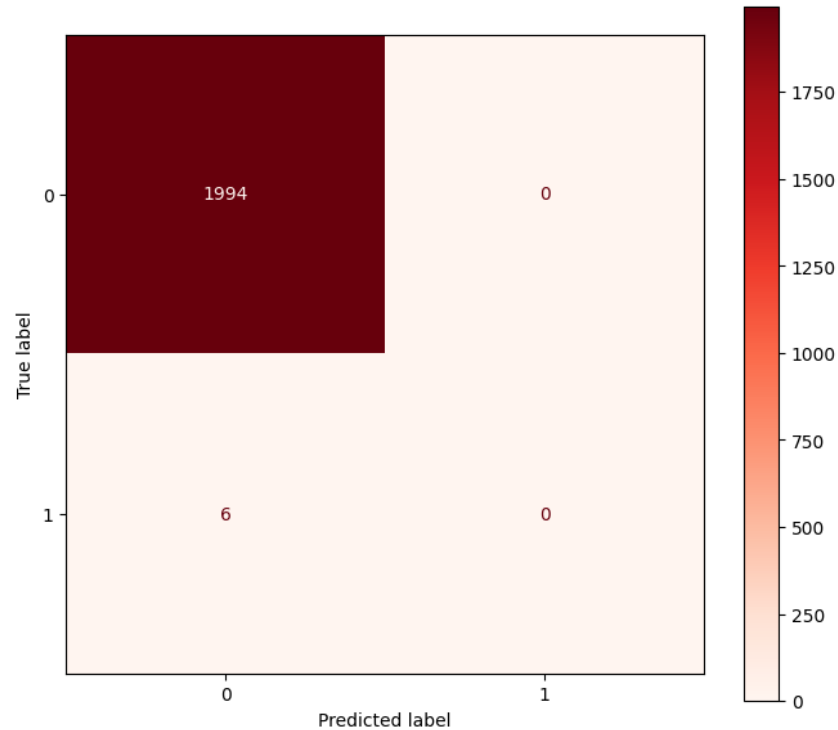
Clustering (K-means)





PCA



**Train****Test**