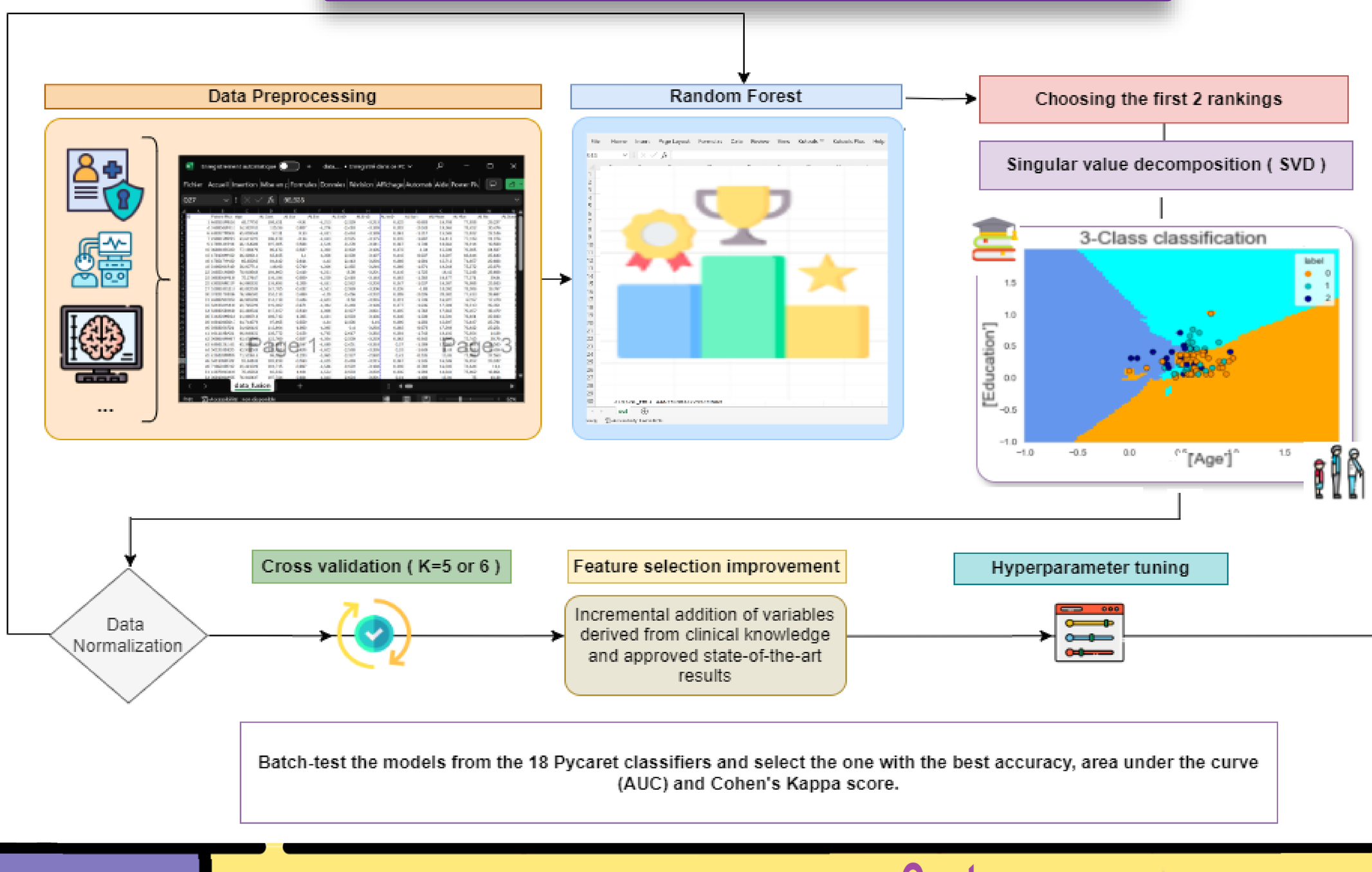
Stepwise and cost-aware feature selection for multiclass-classification of neurodegenerative and neurovascular diseases

Parkinson

The stepwise features addition in multimodal cohorts and the batch learning of simple models could create a clinical standard for monitoring patients with complex brain 🧠 diseases.

Stroke



Batch-test the models from the 18 Pycaret classifiers and select the one with the best accuracy, area under the curve (AUC) and Cohen's Kappa score.

COHORTS	Best Classifiers	Num. of features	Cost-aware (in comparison to others)	Accuracy	AUC
Parkinson 206 Pat - 236 Var.	Extra Trees Classifier	17		0.84	0.95
	Ada Boost Classifier	6	💲	0.88	0.97
Stroke 203 Pat. - 255 Var.	Naive Bayes	11		0.76	0.83
	Gradient Boosting	9		0.78	0.85
	Naive Bayes	8	💲	0.78	0.71

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