

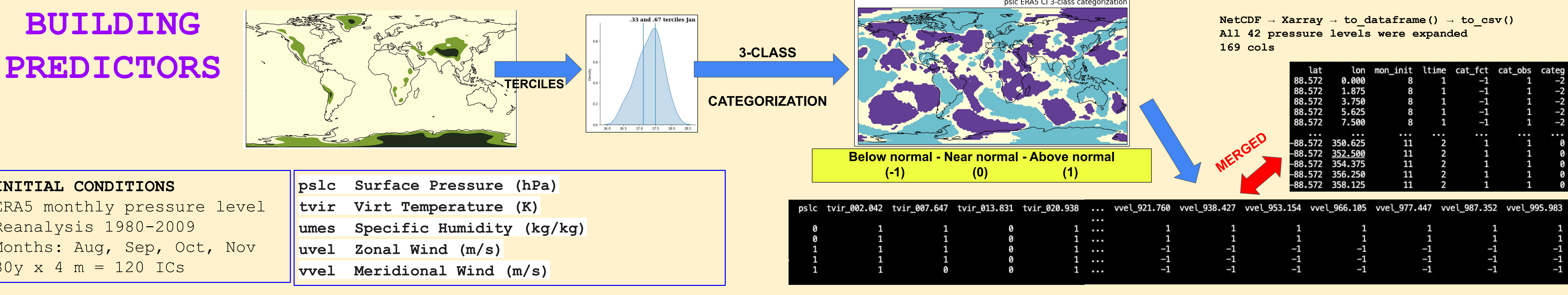
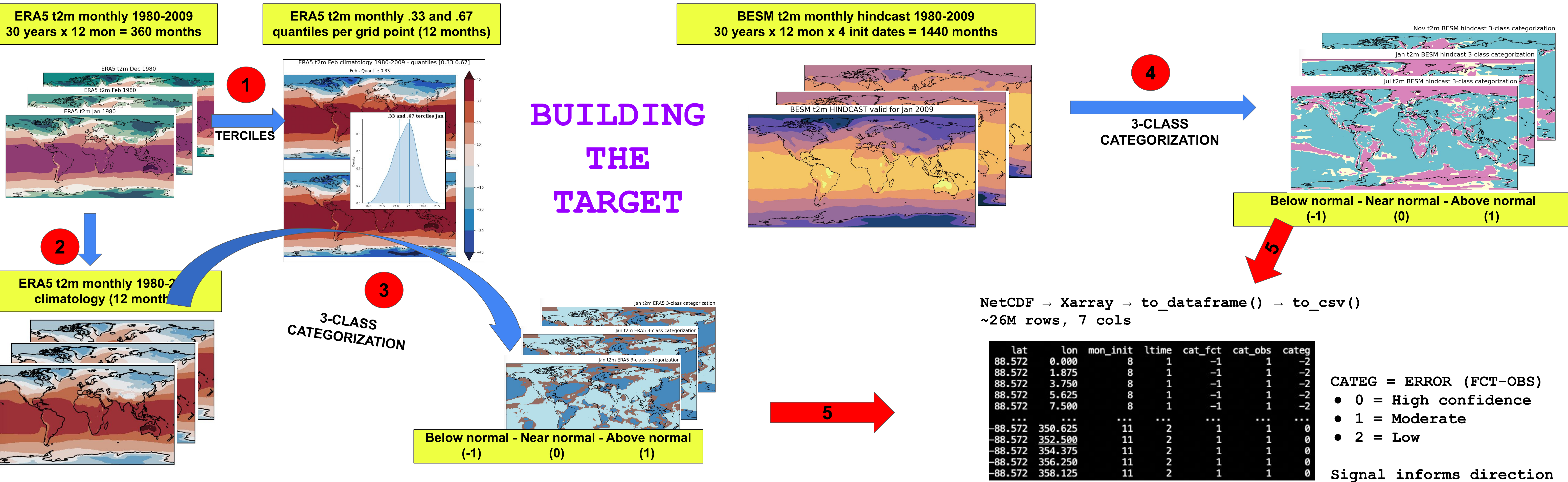
Climate forecast reliability by artificial intelligence classification

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Goal Estimate monthly 2m temp forecast reliability by AI from a given initial condition

METHODOLOGY	
Truth (assumption)	t2m forecast near normal
Independent variables	All atmospheric model initial conditions variables at all levels (predictors)
Dependent variables	t2m (2m temperature) (target variable)
Both independent and dependent variables were categorized into classes below normal, near normal and above normal, based on the correspondent monthly climatology	

DATA	
Resolution	TQ0062L042 grid 96 x 192 x 42 pressure levels
Time	1980-2009 hindcast (30 years)
Initial Conditions	Aug, Sep, Oct, Nov (4 x 30ys = 120 initial conditions)
Forecasts	12 months for each IC (12m x 30ys = 360 monthly forecasts)



AI MODELING

DECISION TREE CLASSIFIER

- **Predictors:** <all_169_meteo_vars> + lat + lon + cat_fct
- **Target:** categ
- Loop in init_month and lead time -> so data were separated at each iteration

