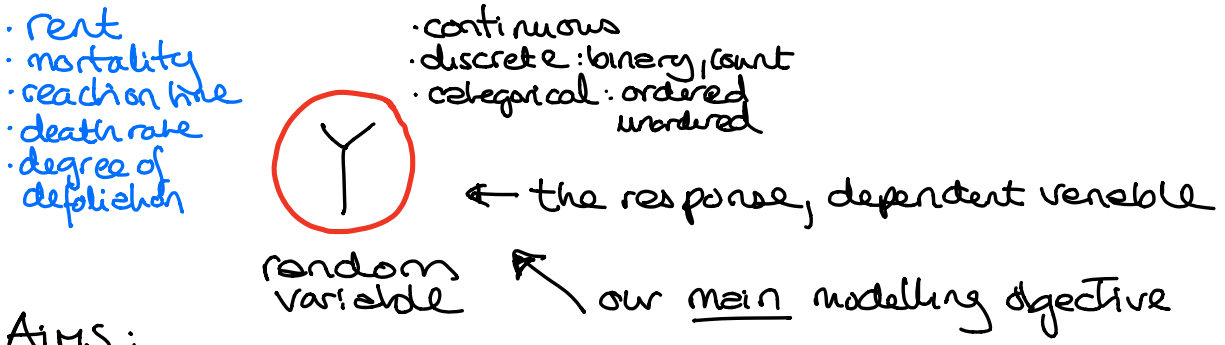
THAYSIS GLOT : M1

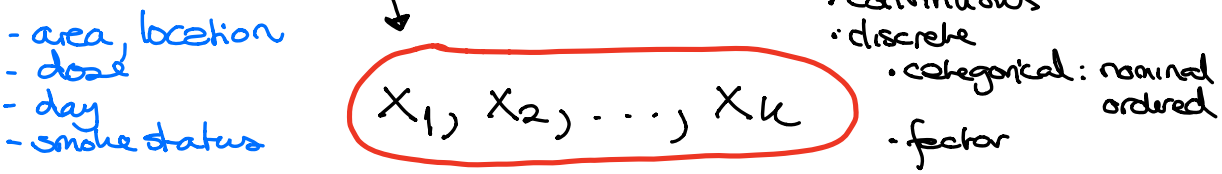
⊗ Expanding the regression framework



AIMS:

1) Make a prediction of Y (in a specific setting.

2) Understand relationship between response and



↑ covariates, explanatory variables independent variables, regressors, predictors, ...

fixed - not random. If random, we consider conditional modelling

We will consider relationships between

the conditional mean of Y: $E(Y|x) = \mu$

end linear combinations of the covariates in a linear predictor:

$$\eta = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \cdots + \beta_k x_k = x^T \beta$$

$1 \times p$, $p \times 1$, $p = k+1$

Pairs (x_i, Y_i) are in most cases independent $i = 1, \ldots, n$ (so (x_1, Y_1) independent of (x_2, Y_2))

but also dependencies may be modelled.