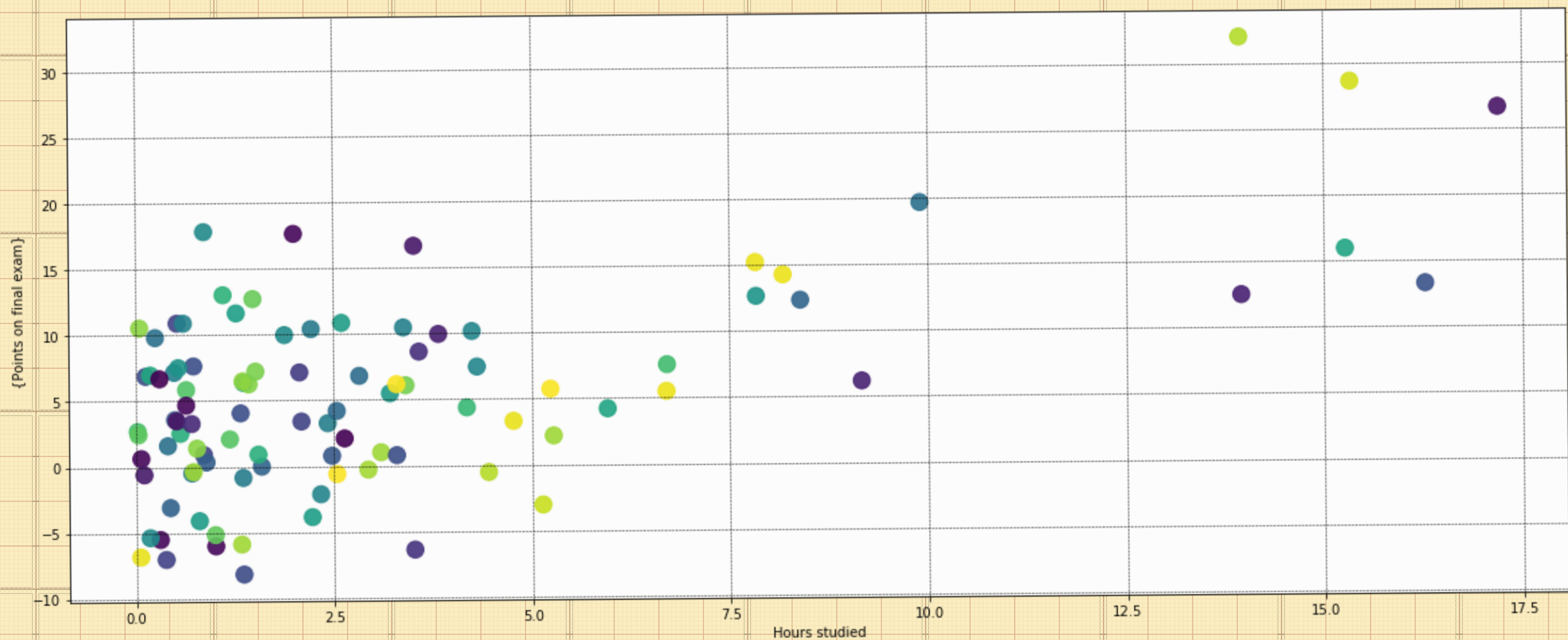


Supervised Learning: Nomenclature

A sample problem: Grade on final test



$x_i \in X$: Input : hours spent studying

$y_i \in Y$: Output : points on test

$f: X \rightarrow Y$: generating function : the truth

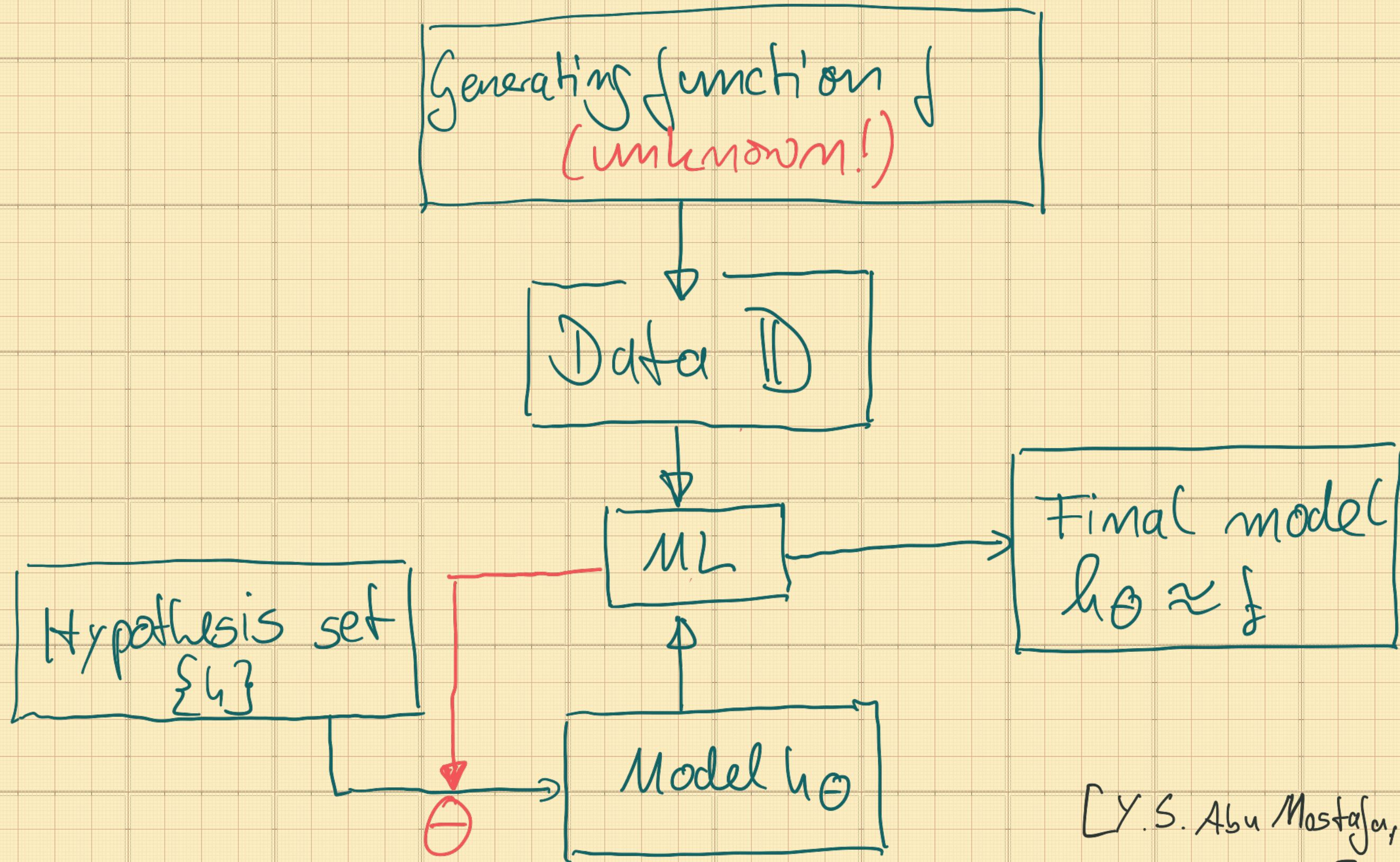
$\{(x_1, y_1), (x_2, y_2), \dots, (x_N, y_N)\} =: D$: data

$h: X \rightarrow Y$: hypothesis set

Θ : parameters : trainable

$h_\theta: X \xrightarrow{\theta} Y$: Model : a specific choice from $\{h\}$

$h_\theta(x^*)$: Prediction



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