Logistic regression:

- Minimize loss fn

$$\sum_{i=1}^{m} \ln(1 + \exp(-y^i f(x^i)))$$

- Define

$$f(x) = \sum_j w_j x_j$$

where each feature x_j is predefined

- Jointly optimize parameters $w_0, w_1, \ldots w_n$ via gradient ascent.

Boosting:

- Minimize loss fn

$$\sum_{i=1}^{m} \exp(-y^i f(x^i))$$

- Define

$$f(x) = \sum_t \alpha_t h_t(x)$$

where $h_t(x)$ learned to fit data

- Weights α_j learned incrementally (new one for each training pass)