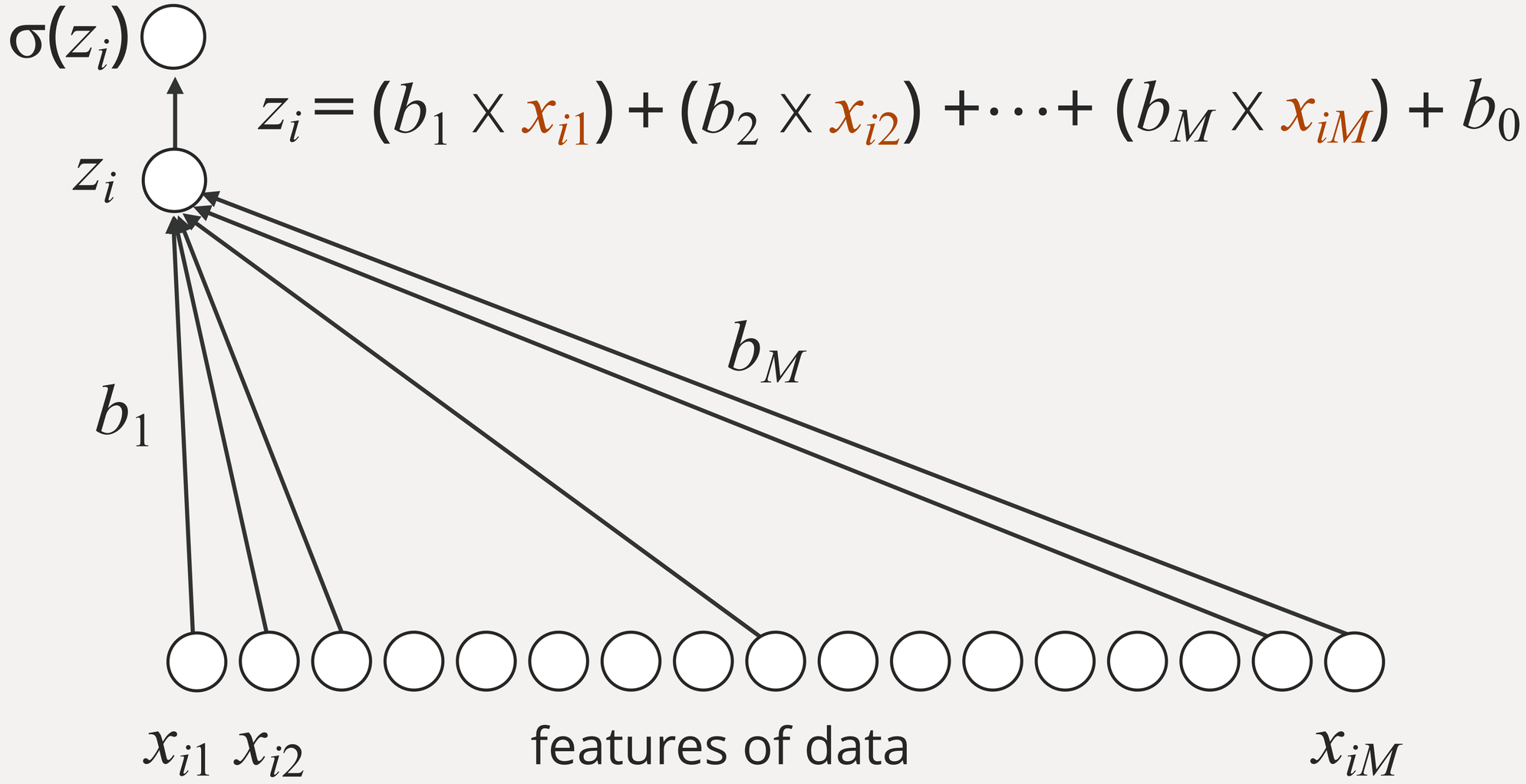
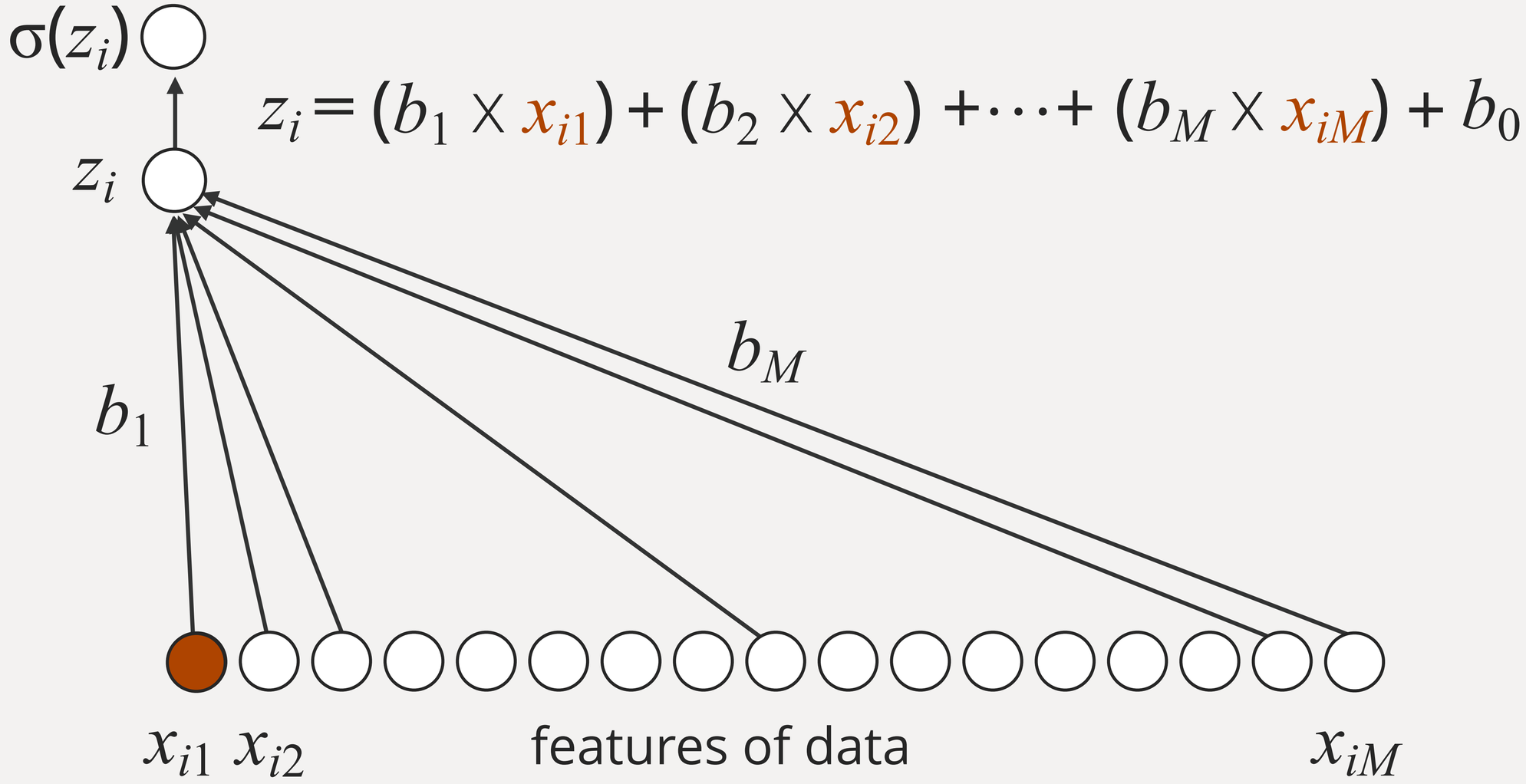
Model Selection

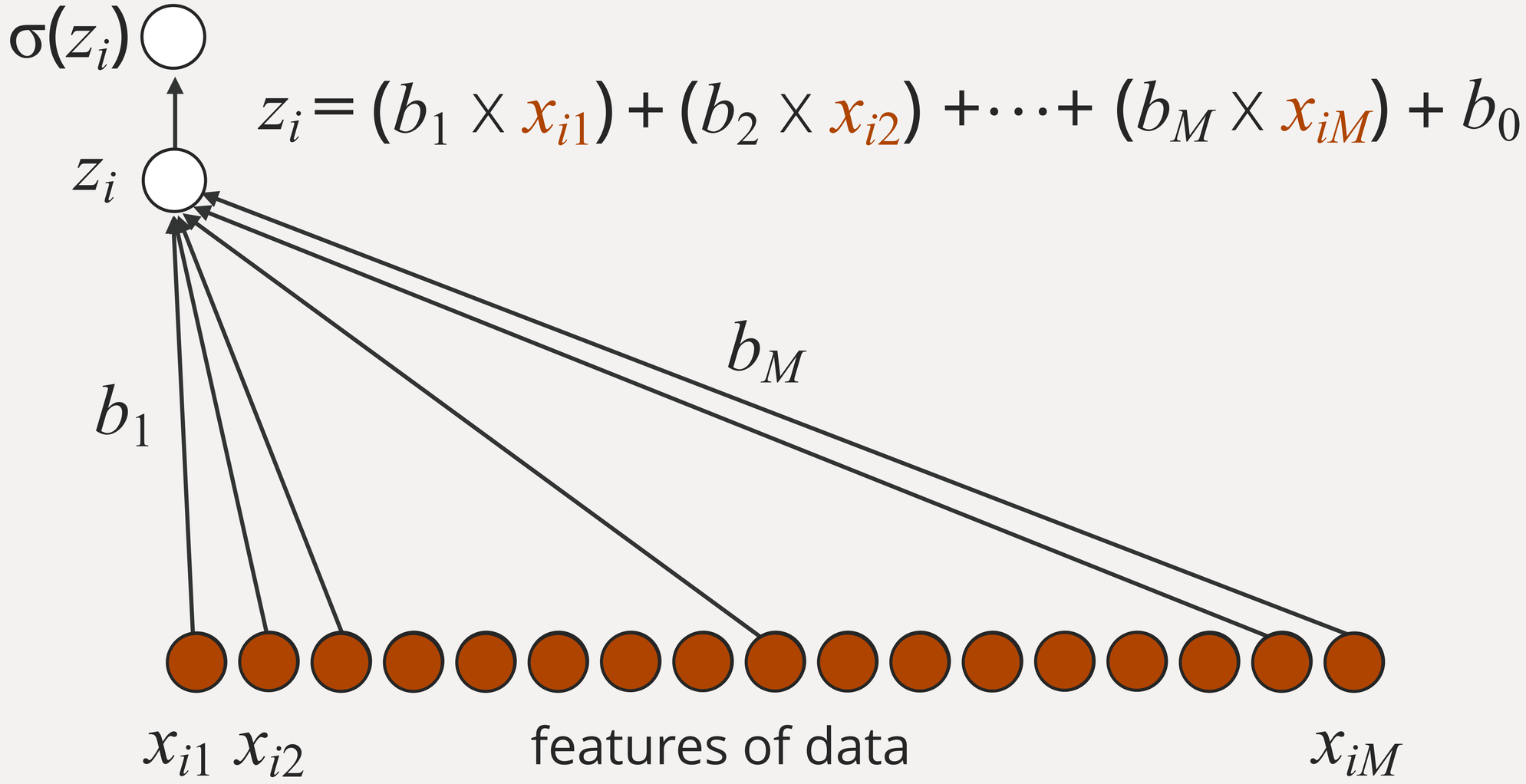
Model Selection



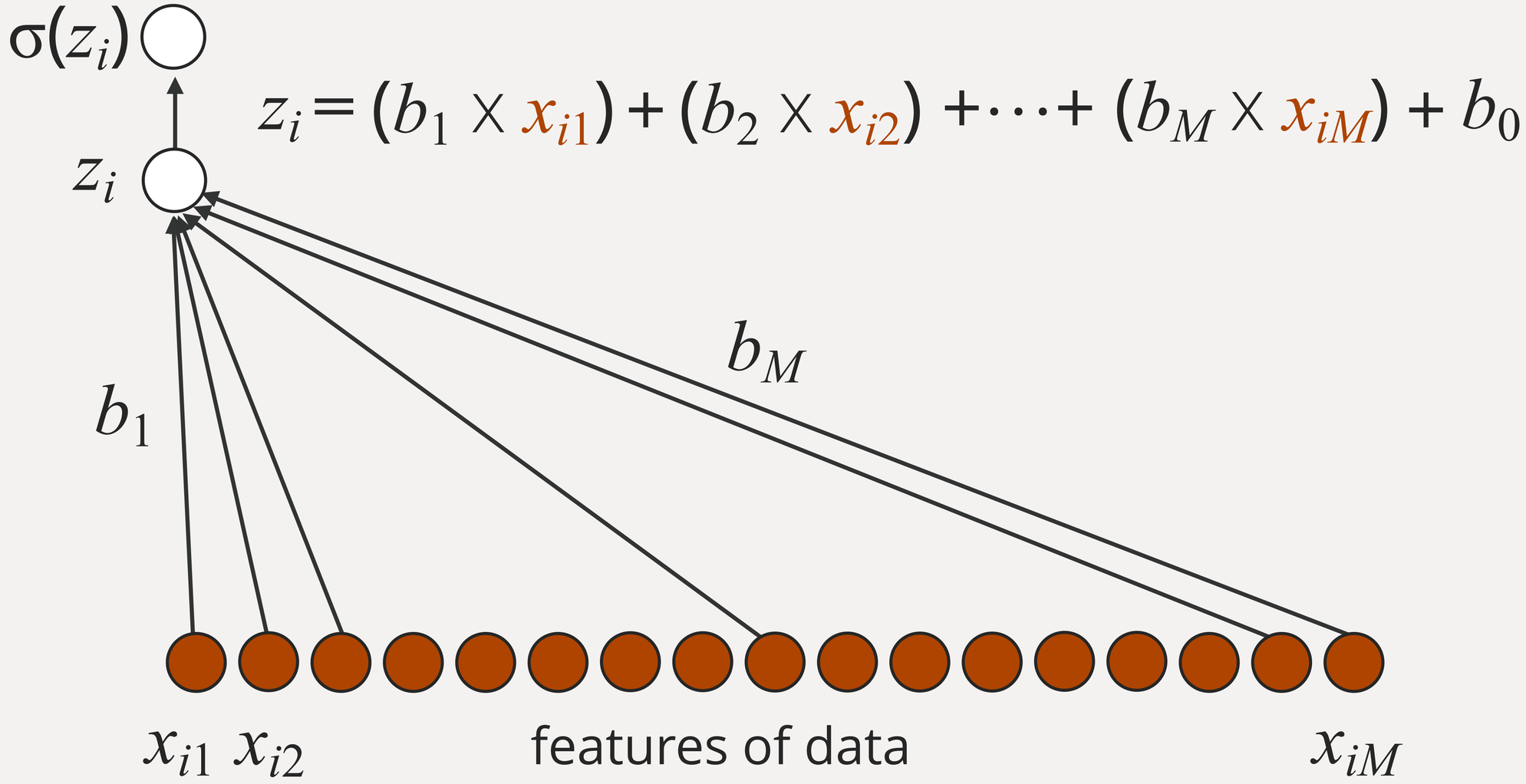
Model Selection



Model Selection

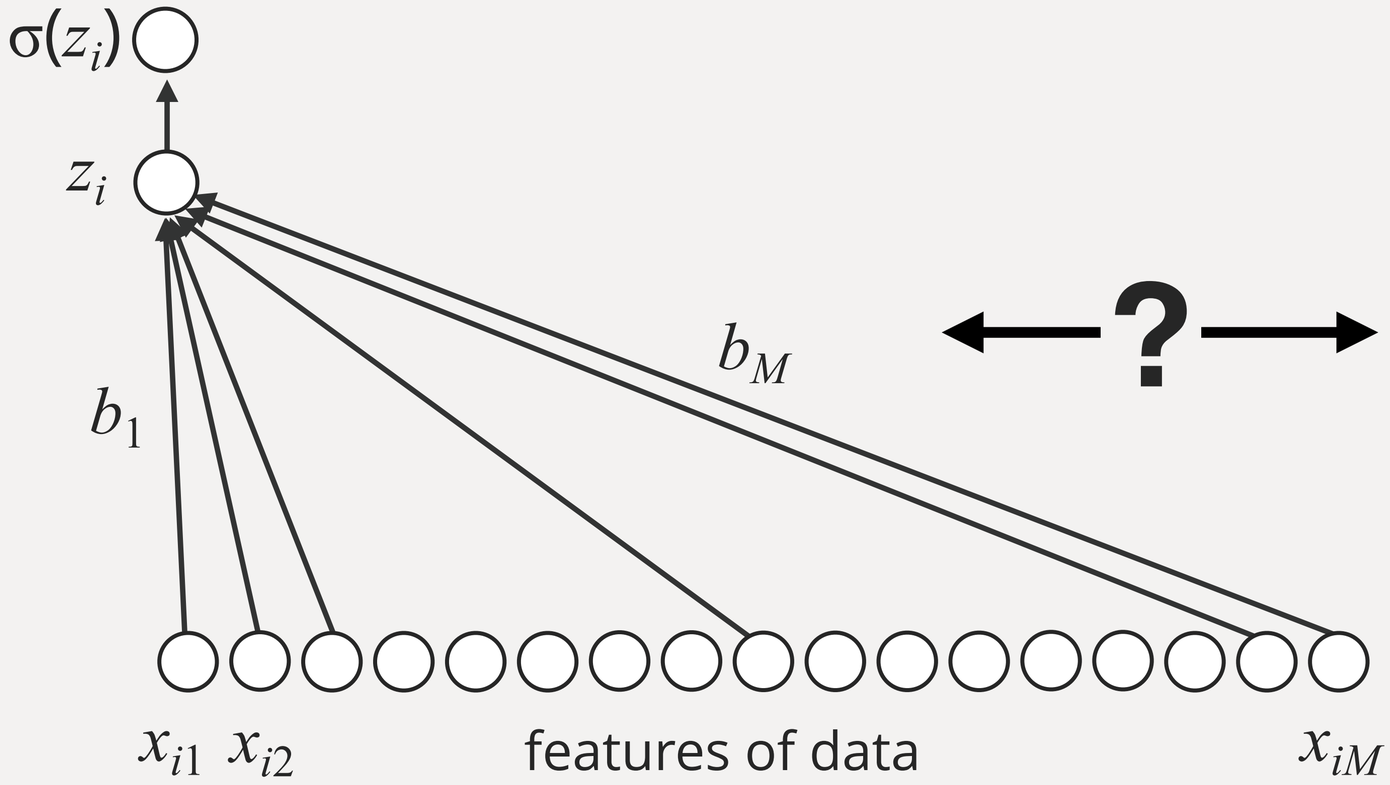


Model Selection

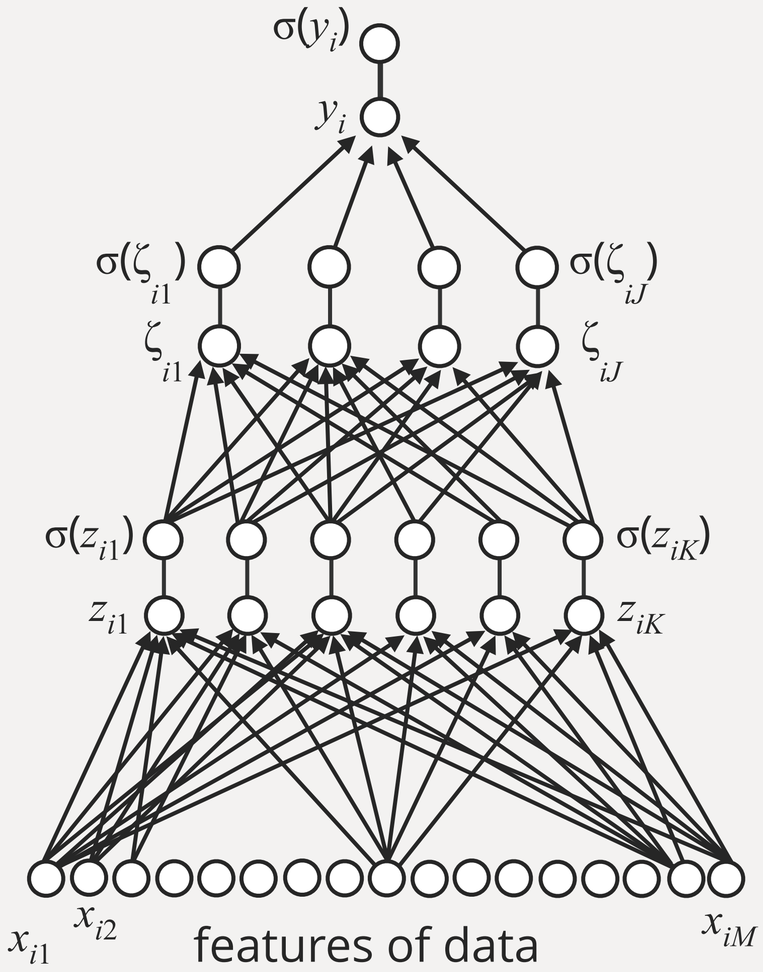


Bias Variance Trade–Off

Logistic Regression



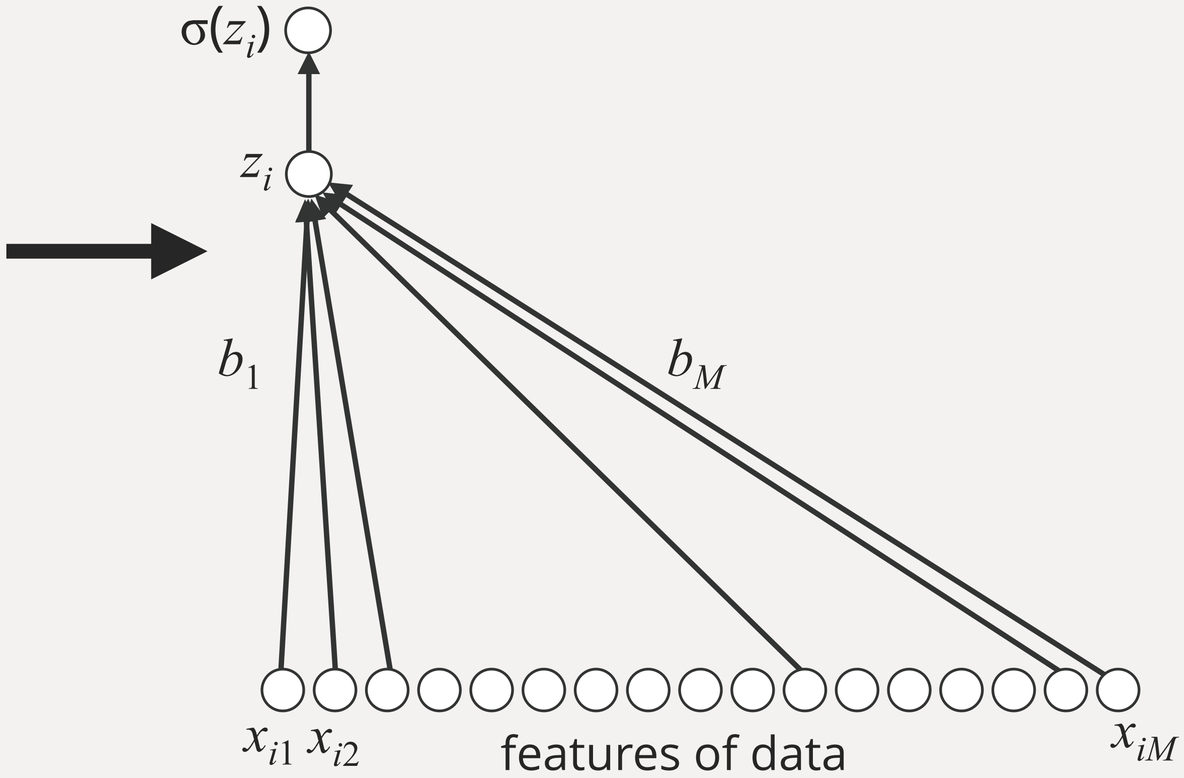
Multilayer Perceptron



Bias Variance
Trade–Off on MNIST

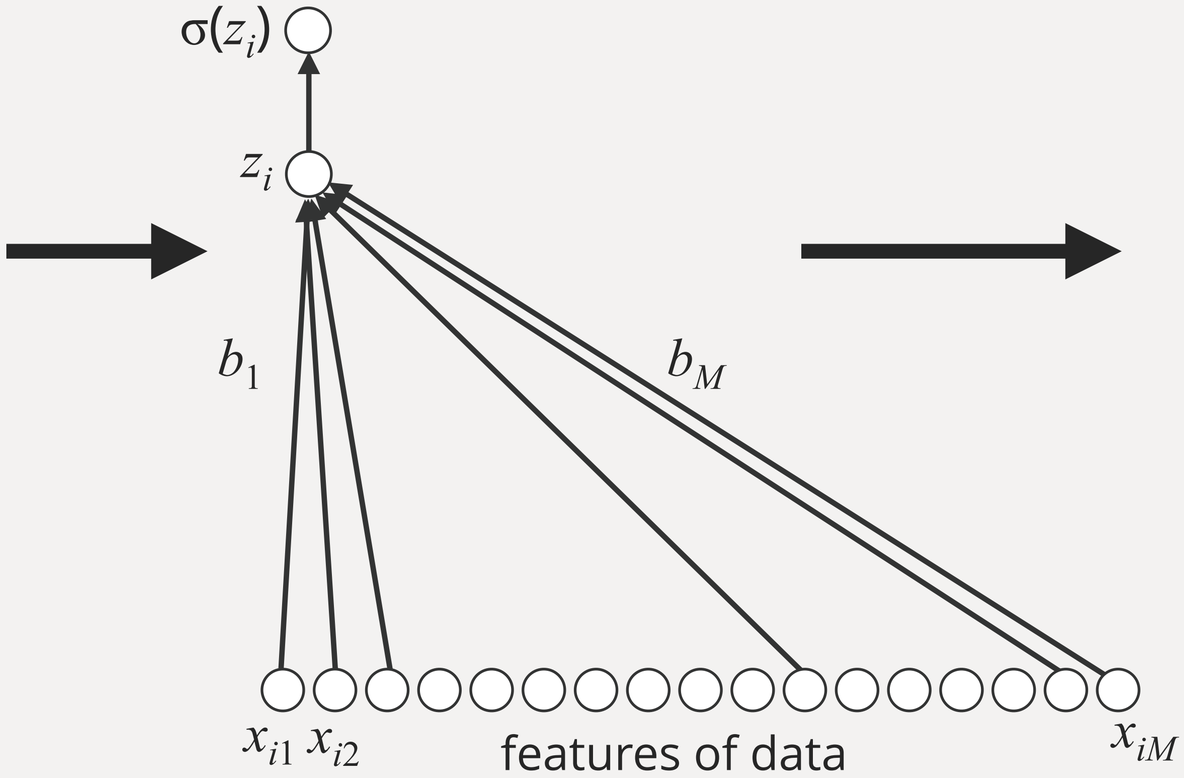
Data Source: MNIST Dataset by LeCun et al. (1999) / CC-by-SA 3.0

Bias Variance Trade–Off on MNIST



Data Source: MNIST Dataset by LeCun et al. (1999) / CC-by-SA 3.0

Bias Variance Trade–Off on MNIST

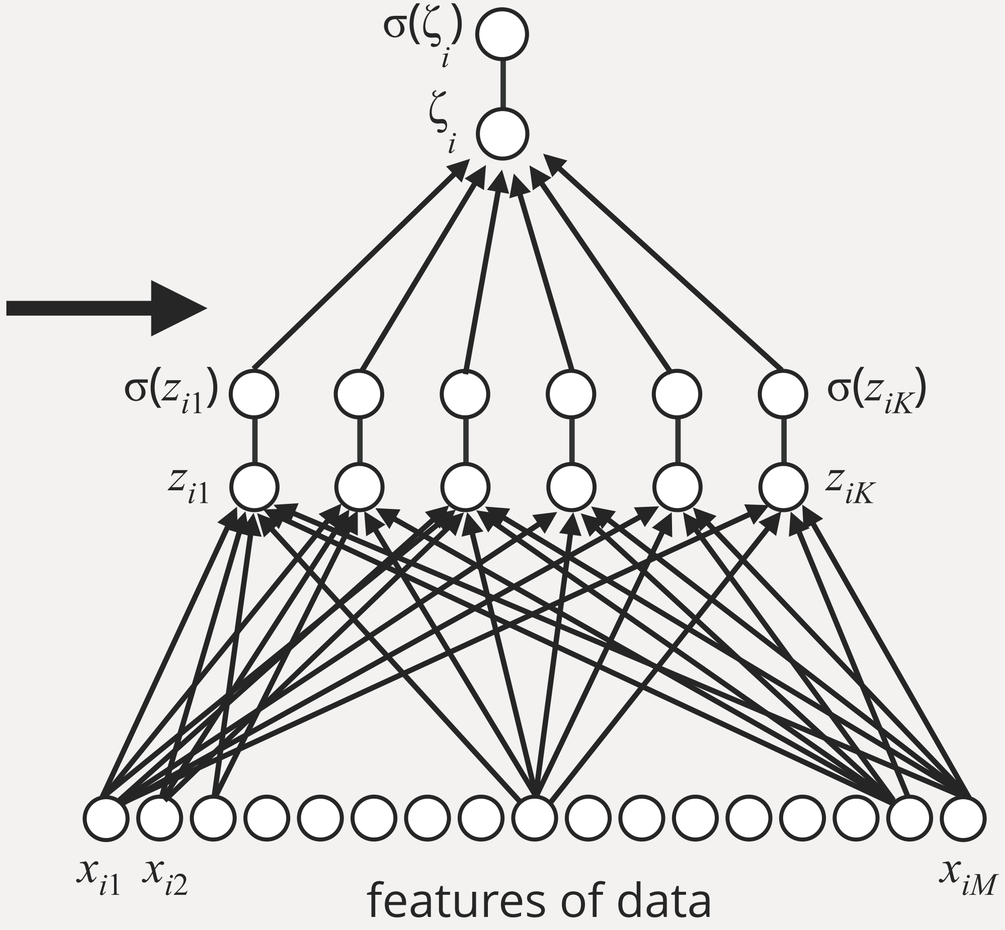


91% accurate

PREDICTION

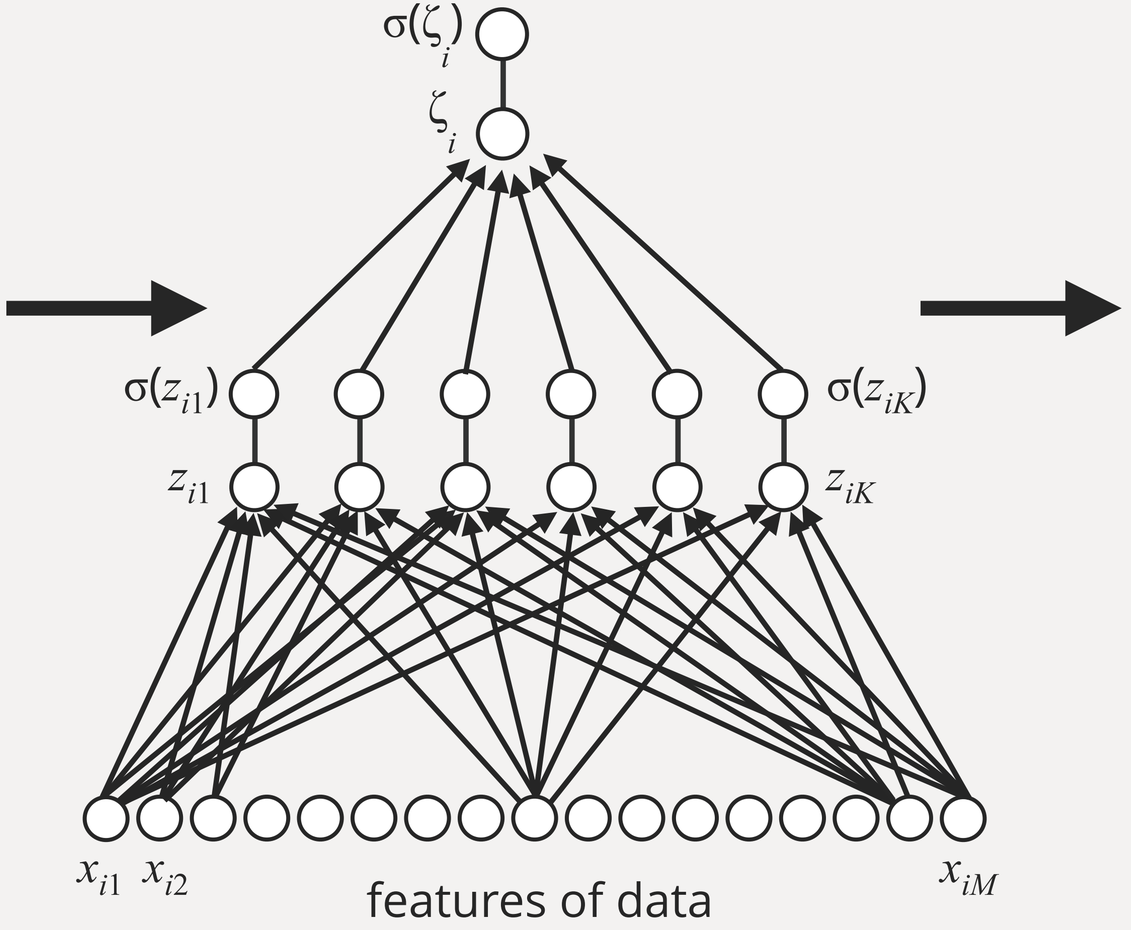
Data Source: MNIST Dataset by LeCun et al. (1999) / CC-by-SA 3.0

Bias Variance Trade–Off on MNIST



Data Source: MNIST Dataset by LeCun et al. (1999) / CC-by-SA 3.0

Bias Variance Trade–Off on MNIST



96% accurate

PREDICTION

Data Source: MNIST Dataset by LeCun et al. (1999) / CC-by-SA 3.0

Logistic regression is restricted to a linear classifier

Multilayer perceptron allows for a non-linear classifier

Credits

MNIST Dataset of Handwritten Digits (Images)

Yann LeCun (Courant Institue, NYU) and Corinna Cortes (Google Labs, New York) CC-by-SA 3.0
http://yann.lecun.com/exdb/mnist/