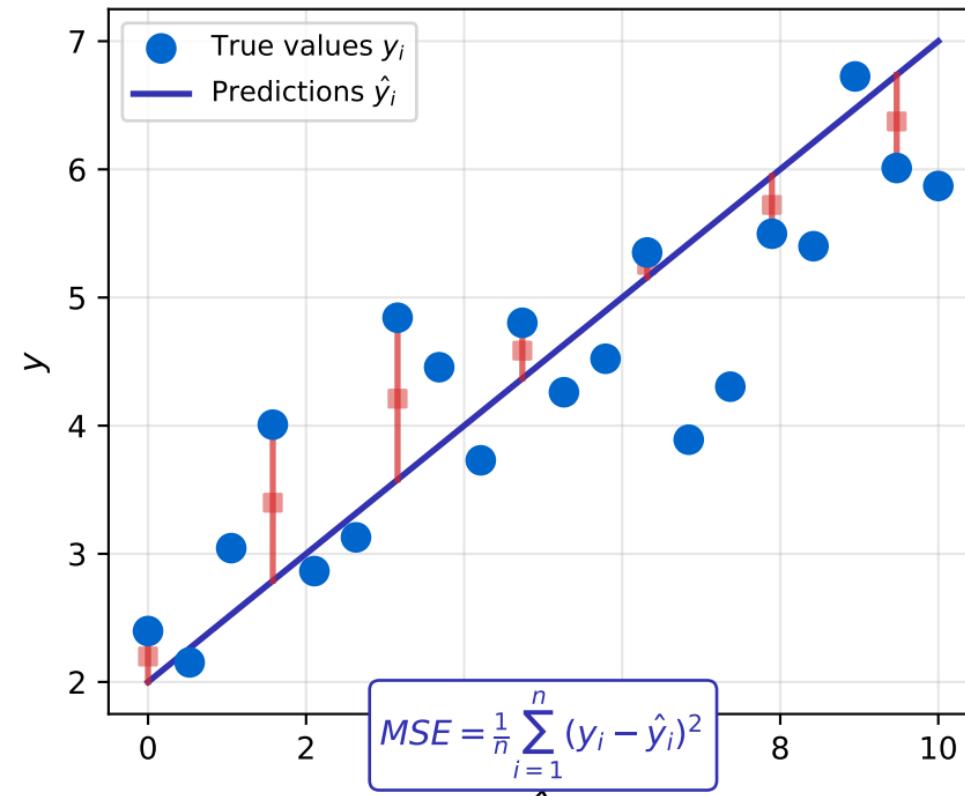
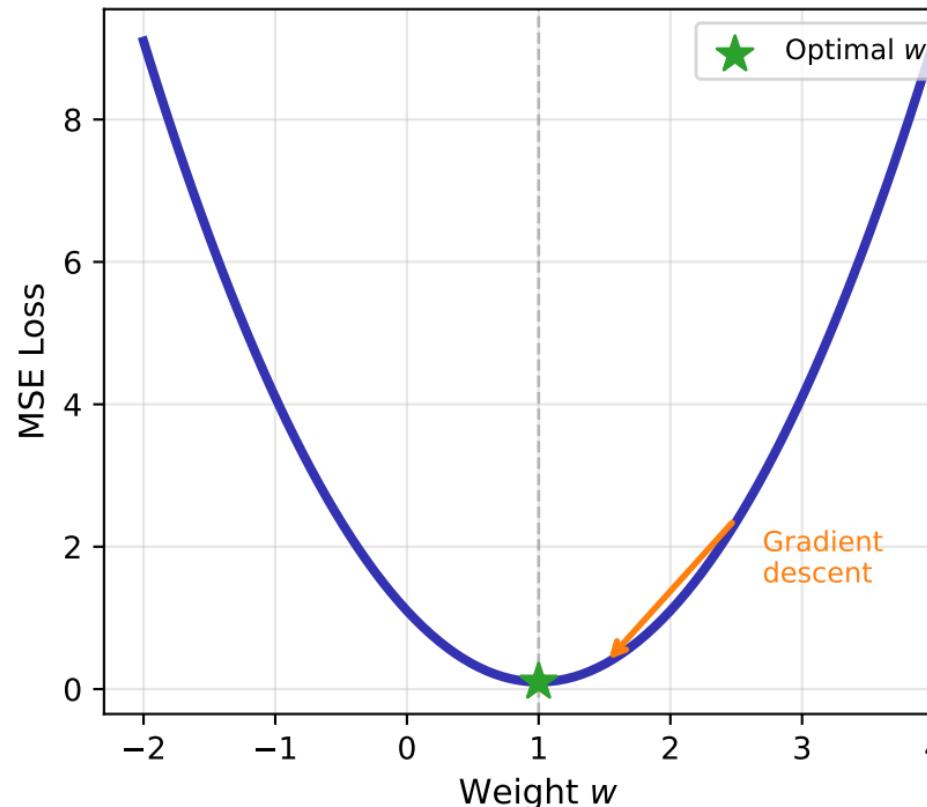


# Mean Squared Error: The Classic Regression Loss

MSE: Measuring Prediction Error



Loss Landscape (1D)



## MSE Properties

**Convex:**

Single global minimum for linear models

**Differentiable:** Smooth gradients everywhere

**Scale-sensitive:** Large errors penalized more (squared)

**Outlier-sensitive:** Squares amplify outlier impact

**Best for:**

Regression problems with normally distributed errors