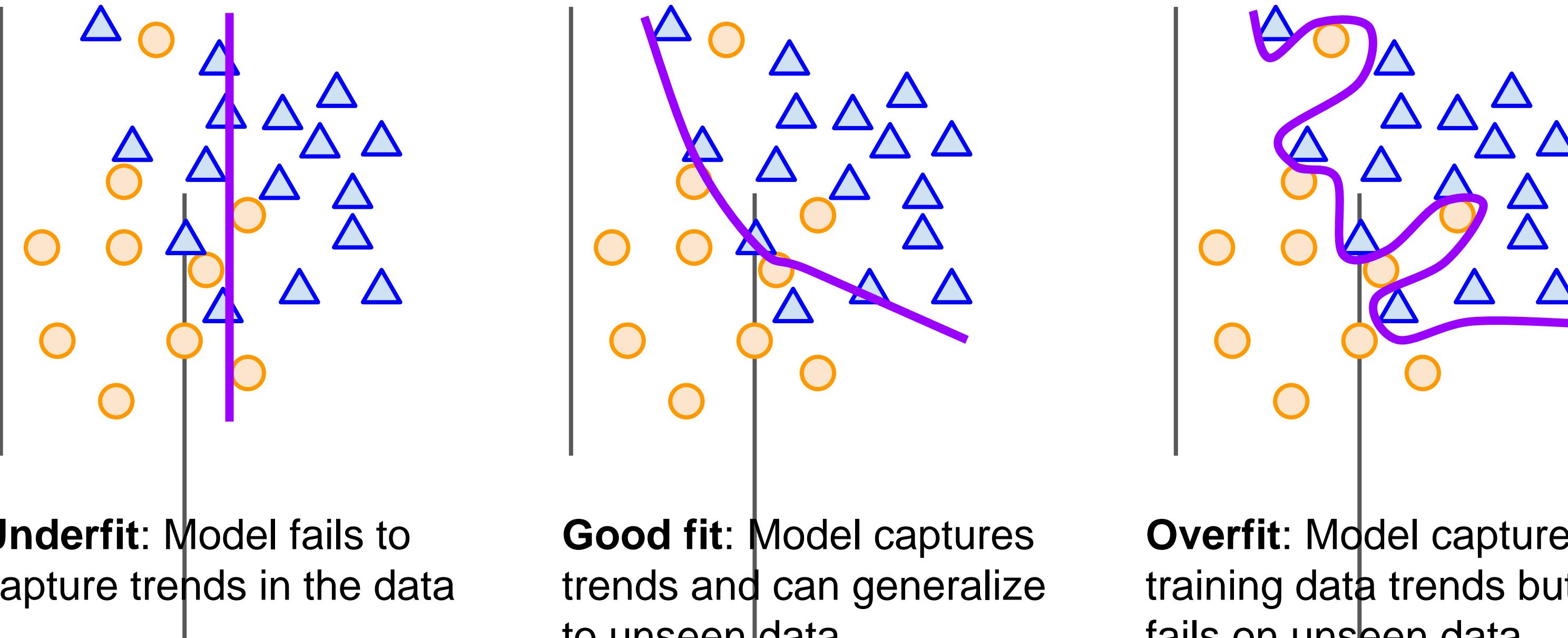
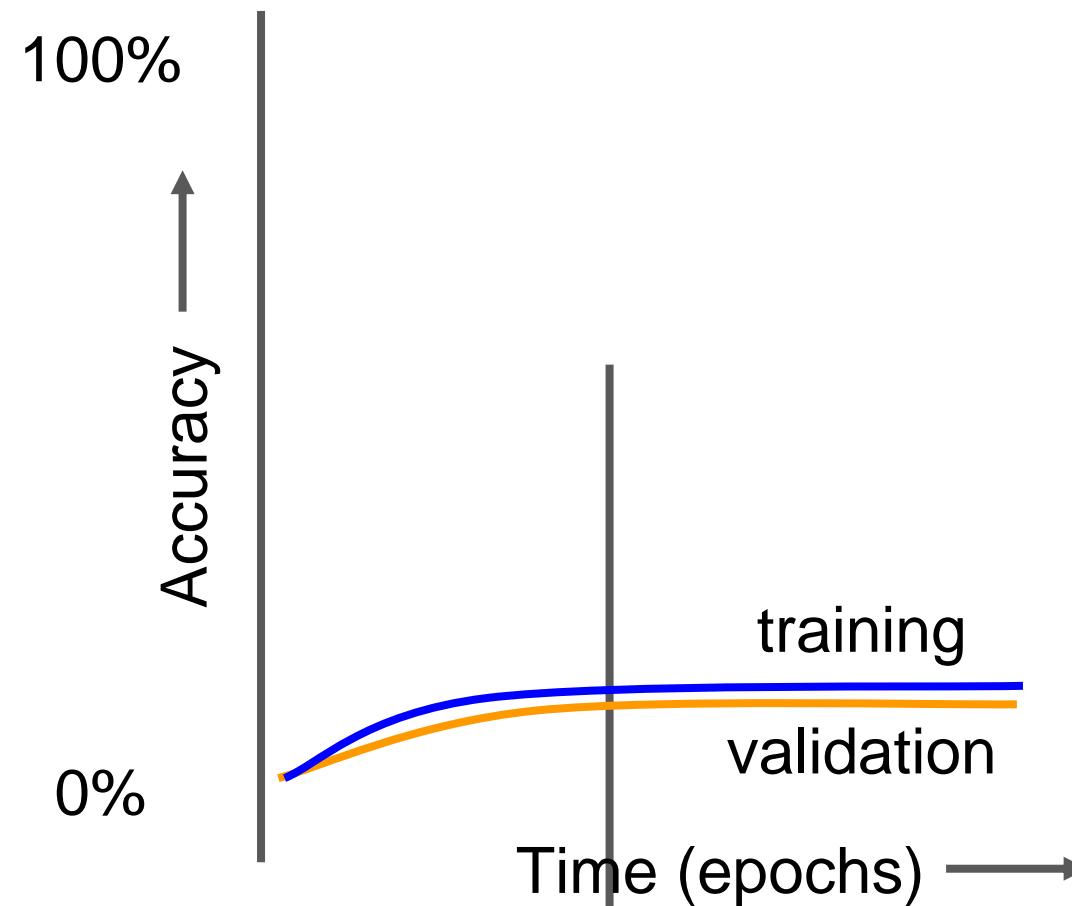


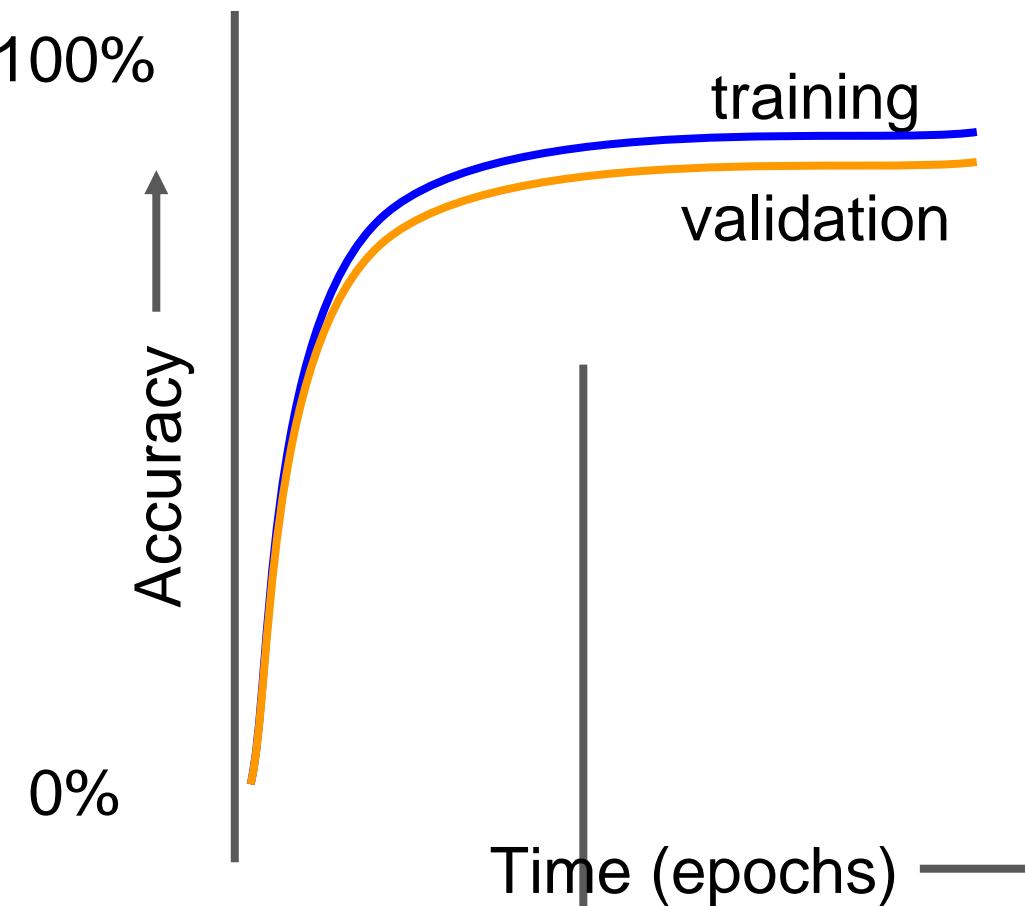
# Underfitting vs. Overfitting



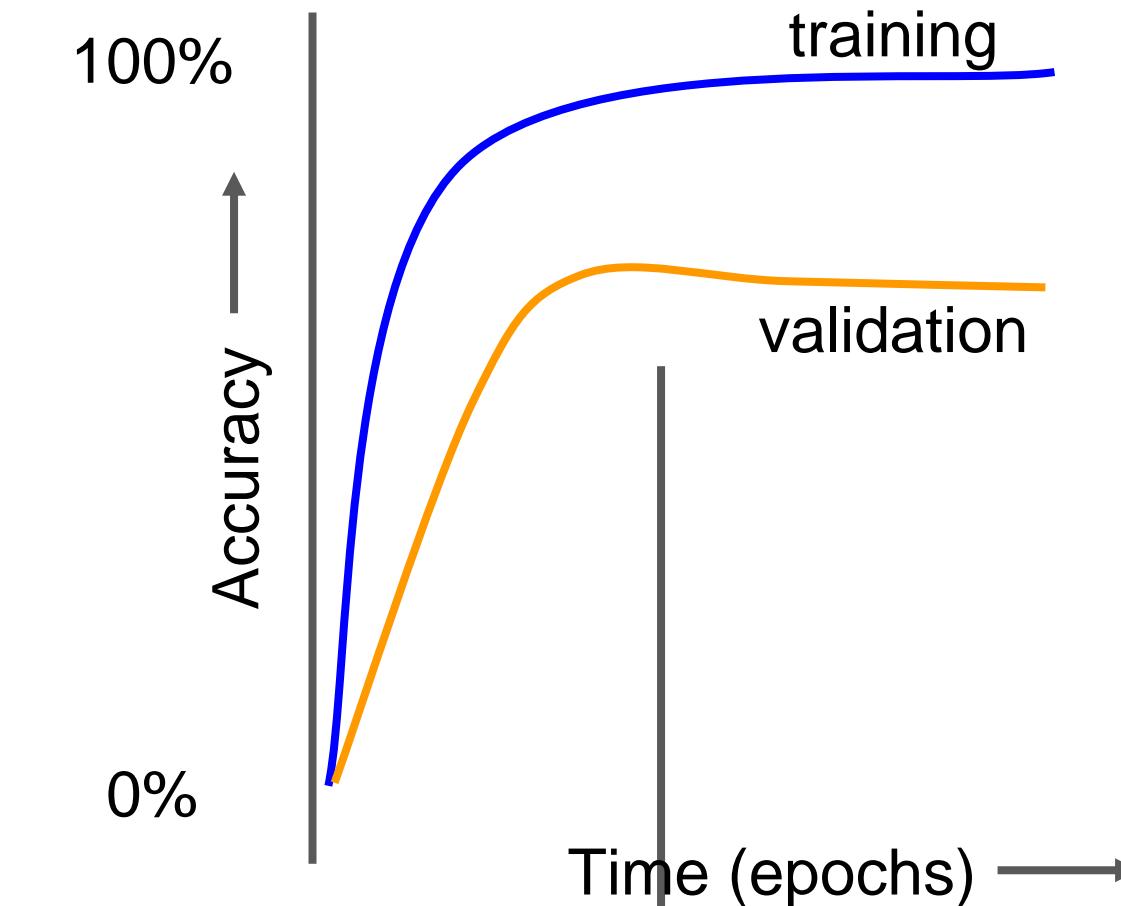
# Spotting Underfitting and Overfitting



**Underfit:** Model performs poorly on training and validation data

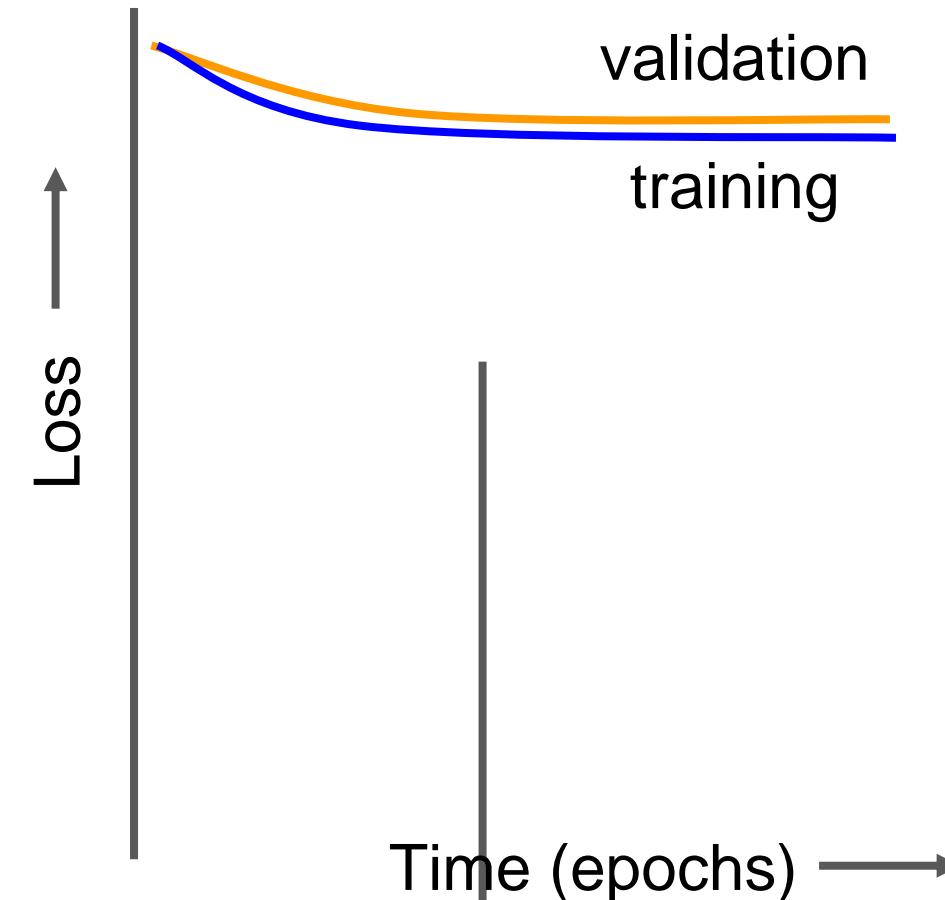


**Good fit:** Model generalizes well from training to validation data

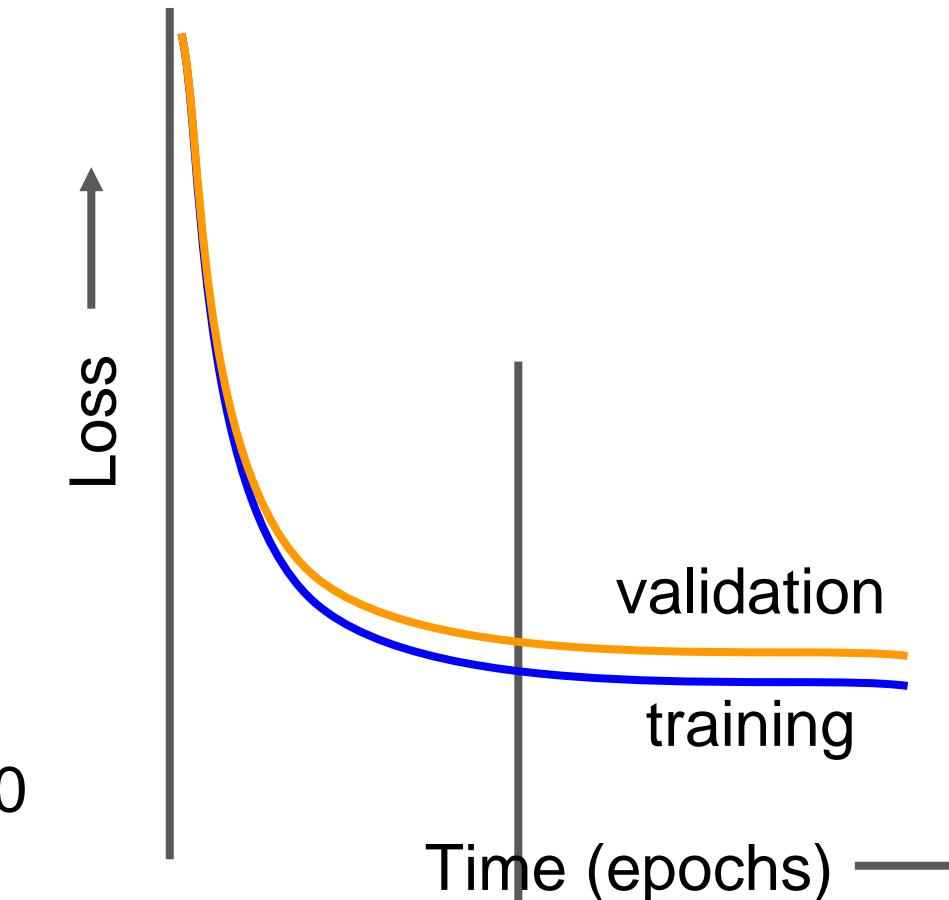


**Overfit:** Model predicts training data well but fails to generalize to validation data

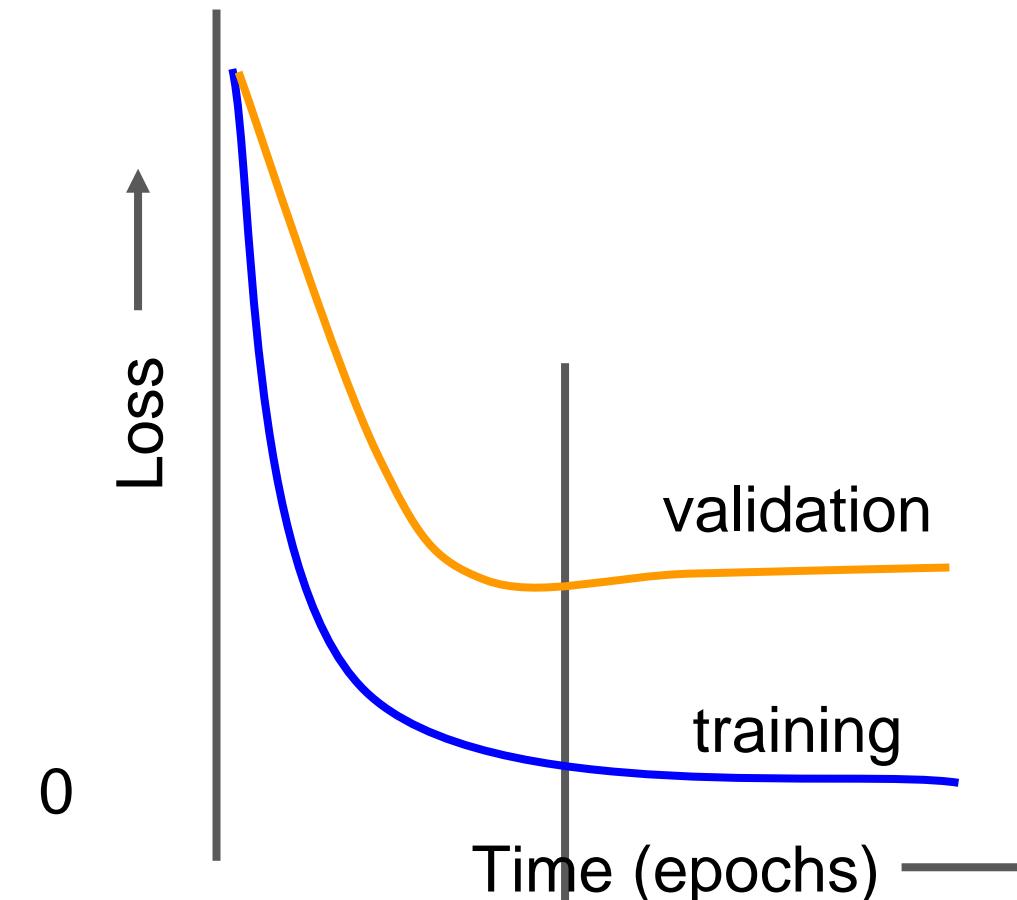
# Spotting Underfitting and Overfitting



**Underfit:** Model performs poorly on training and validation data

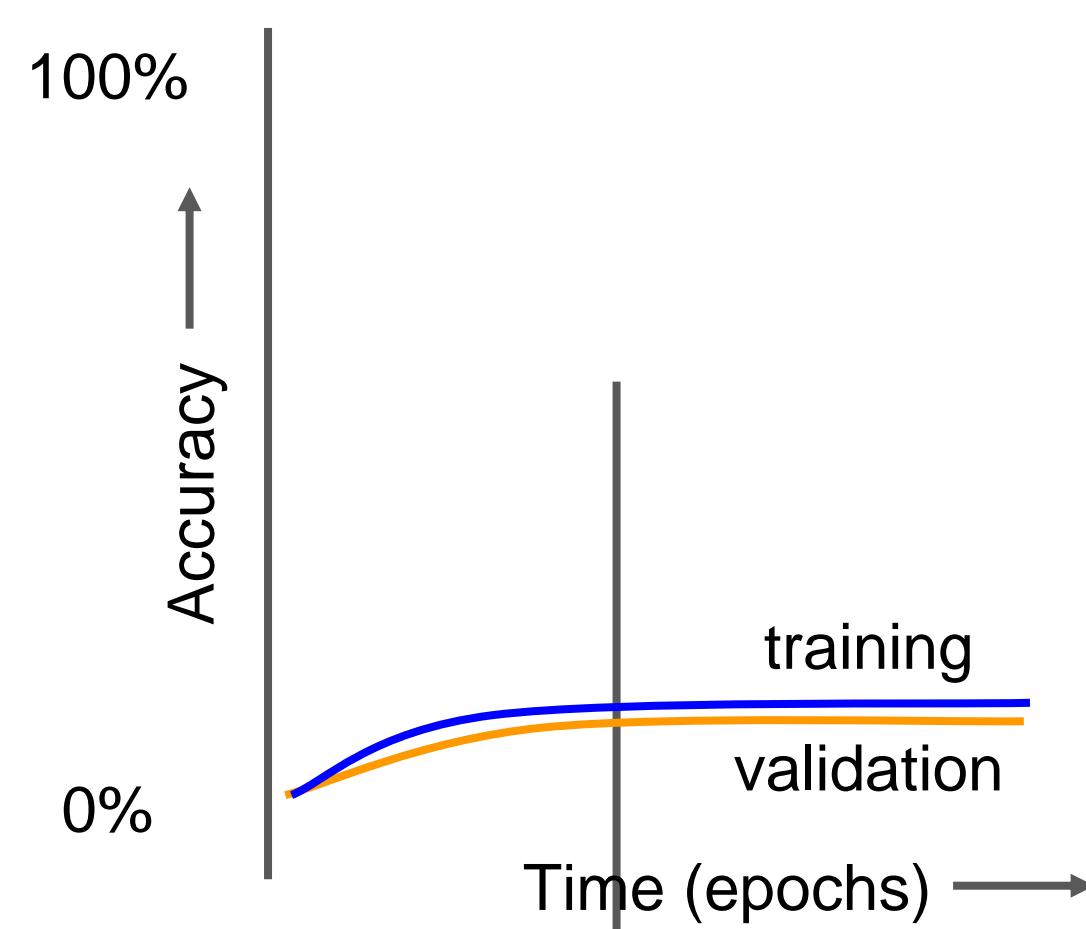


**Good fit:** Model generalizes well from training to validation data



**Overfit:** Model predicts training data well but fails to generalize to validation data

# Fixing Underfitting

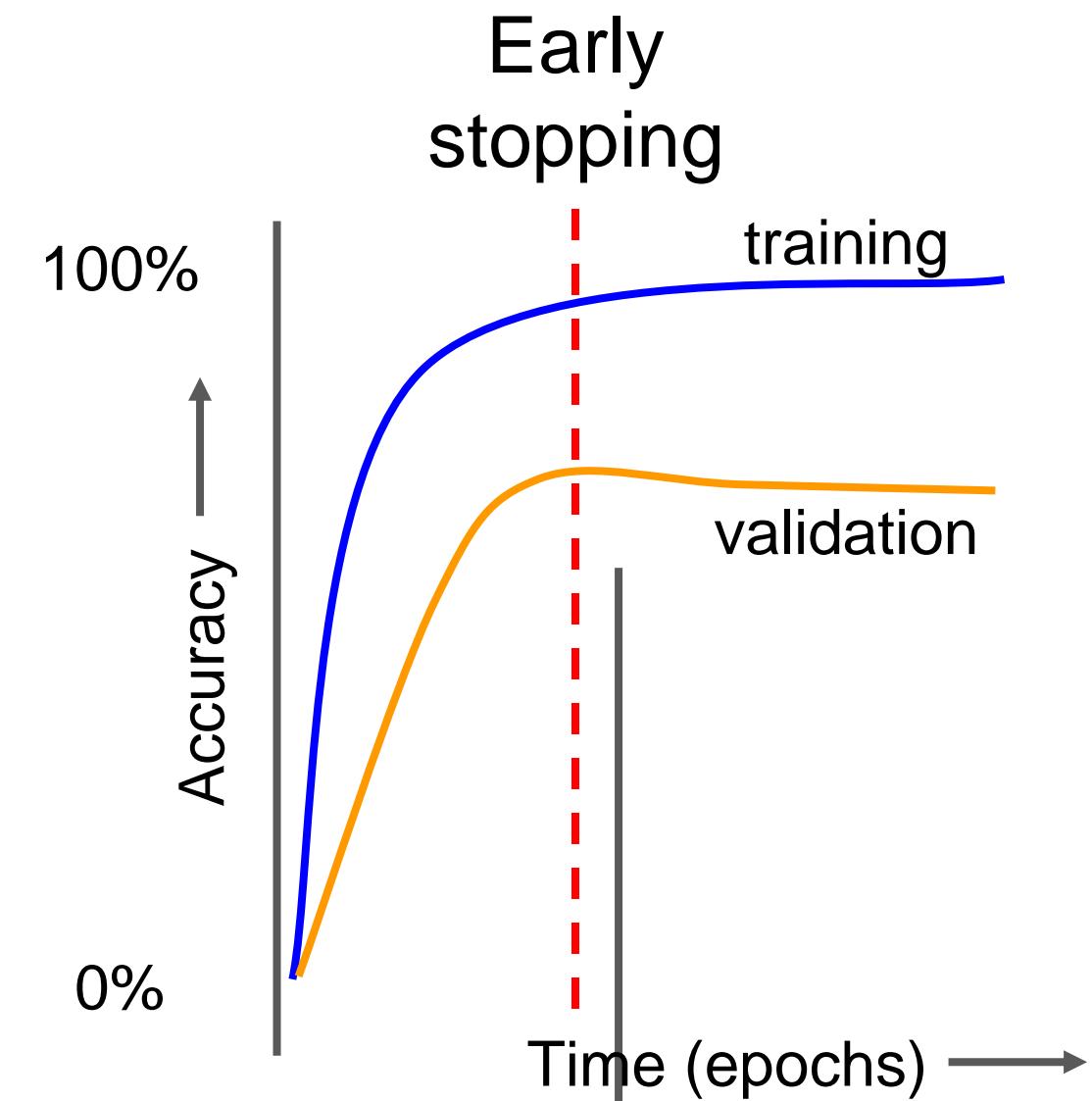


**Underfit:** Model performs poorly on training and validation data

- Get more data
- Try different features or more features
- Train for longer
- Try a more complex model (more layers, more nodes, etc.)

# Fixing Overfitting

- Get more data
- Early stopping
- Reduce model complexity
- Add regularization terms
- Add dropout layers (for neural networks)



**Overfit:** Model predicts training data well but fails to generalize to validation data