

## Questions

1. **(Basic Knowledge) Tuning the Regularization Parameter**
  - What does the regularization parameter  $\lambda$  control in lasso/ridge/elastic net?
  - How is  $\lambda$  typically selected in practice?
  - How does changing  $\lambda$  affect model complexity and the bias–variance tradeoff?
2. **(Conceptual Thinking) Prediction vs. Interpretation**
  - Why might the  $\lambda$  that gives the best prediction not be ideal for interpretation or variable selection?
  - What is the difference between choosing  $\lambda$  for **prediction accuracy** versus **variable selection**?
3. **(Technical Understanding) Statistical Inference after Regularization**
  - Why is classical statistical inference (e.g., standard errors,  $p$ -values) not directly valid after fitting a lasso model?
4. **(Open Question) In your view, when is regularized regression best treated as a predictive tool rather than an inferential model?**