PSY9511: Seminar 4

Testing, resampling, and splitting

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Model assessment: Cross-validation

Fits k models for $n > k$ datapoints, each leaving n/k datapoints out for testing.

+ Uses all data to train models
+ Yields multiple (**correlated!**) estimates of out-of-sample error, which can be used to fit a distribution
- Different choices of k (and exact splits) yields different results
- **No longer a single model from which information (e.g. parameter estimates and p-values) can be derived**

Model assessment: The bootstrap

Model assessment: Train/validation/test

Nested cross-validation