

Lesson 32: Complete ML Pipeline

Data Science with Python – BSc Course

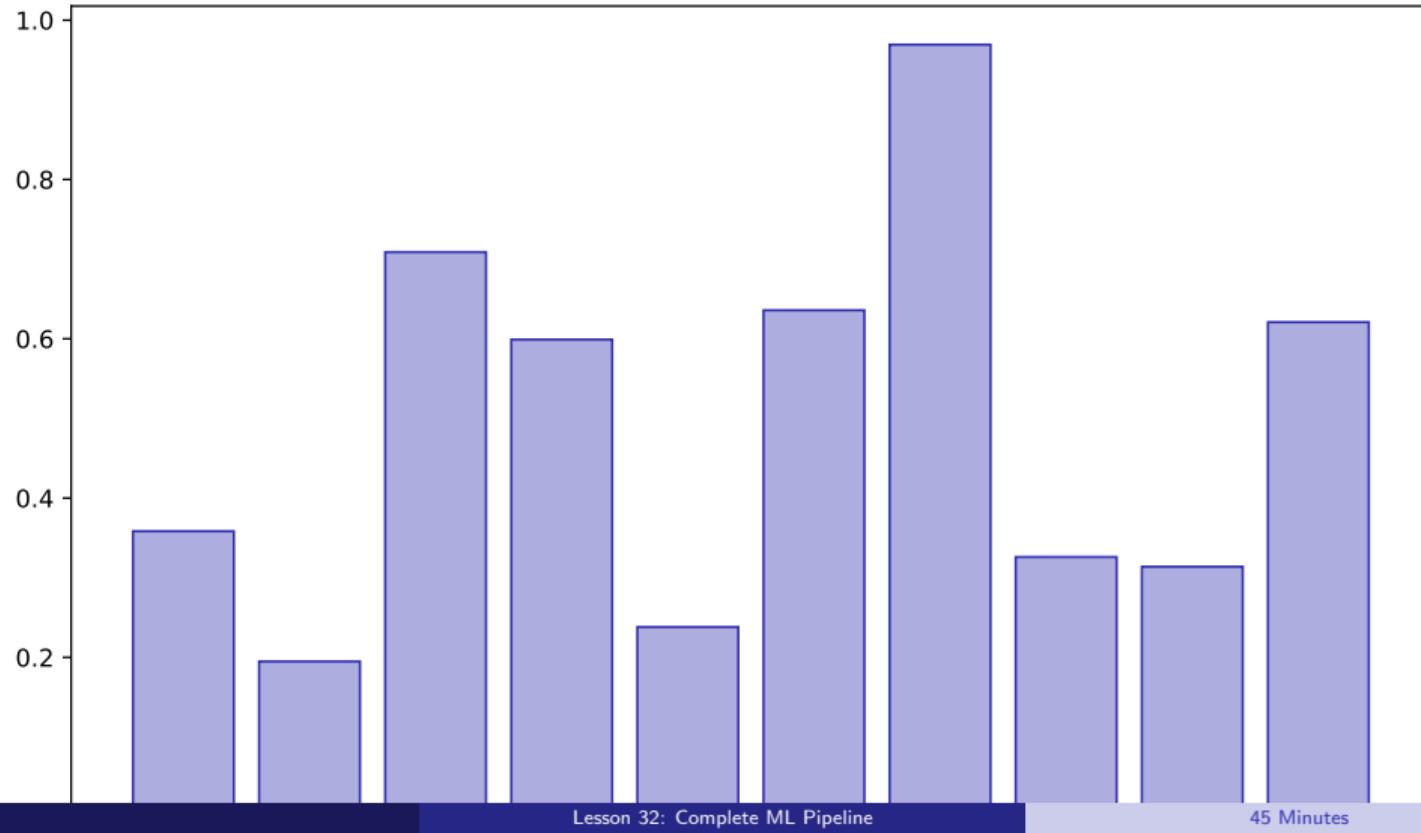
45 Minutes

After this lesson, you will be able to:

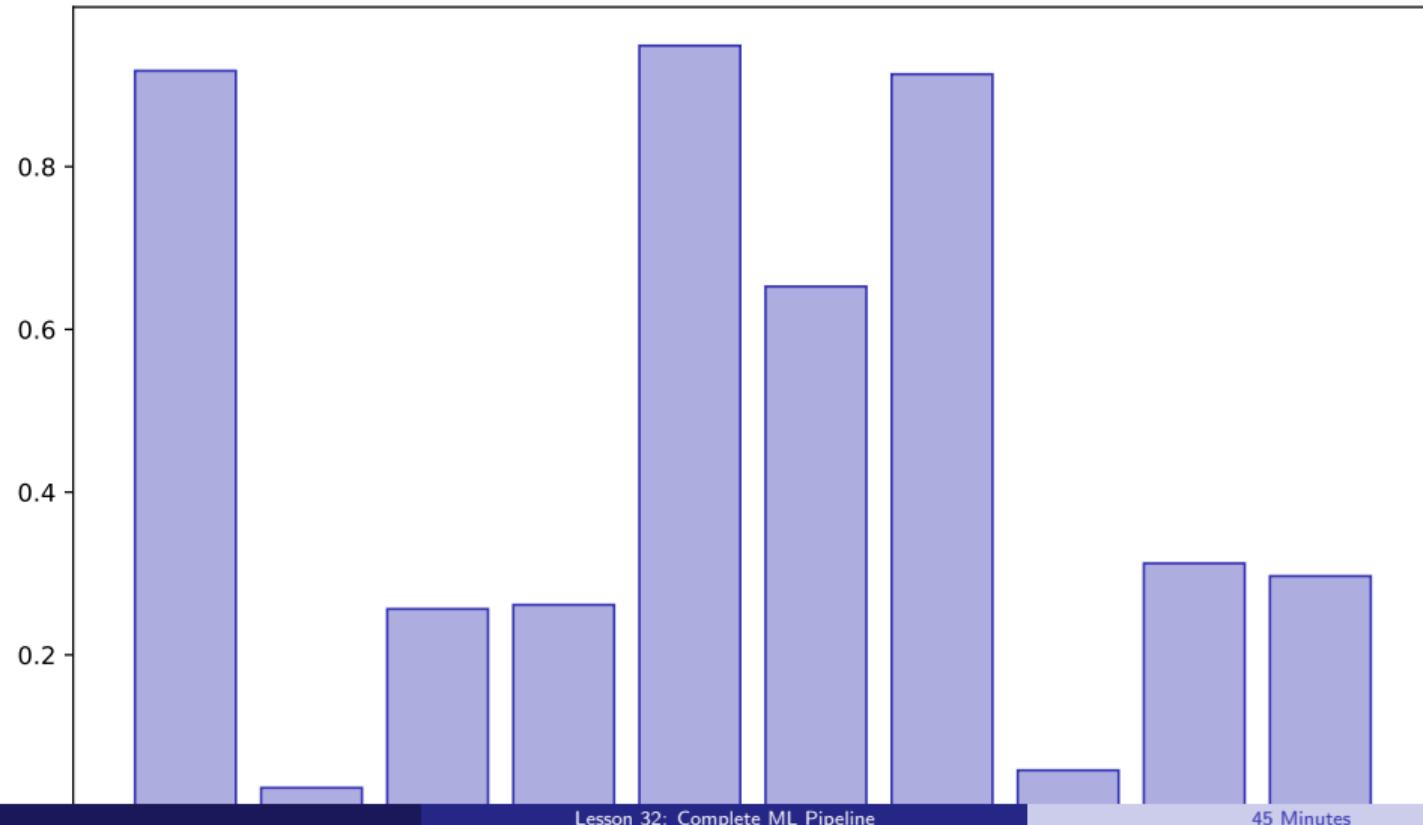
- Build sklearn pipelines
- Apply cross-validation properly
- Tune hyperparameters
- Prevent data leakage

Building towards your final project

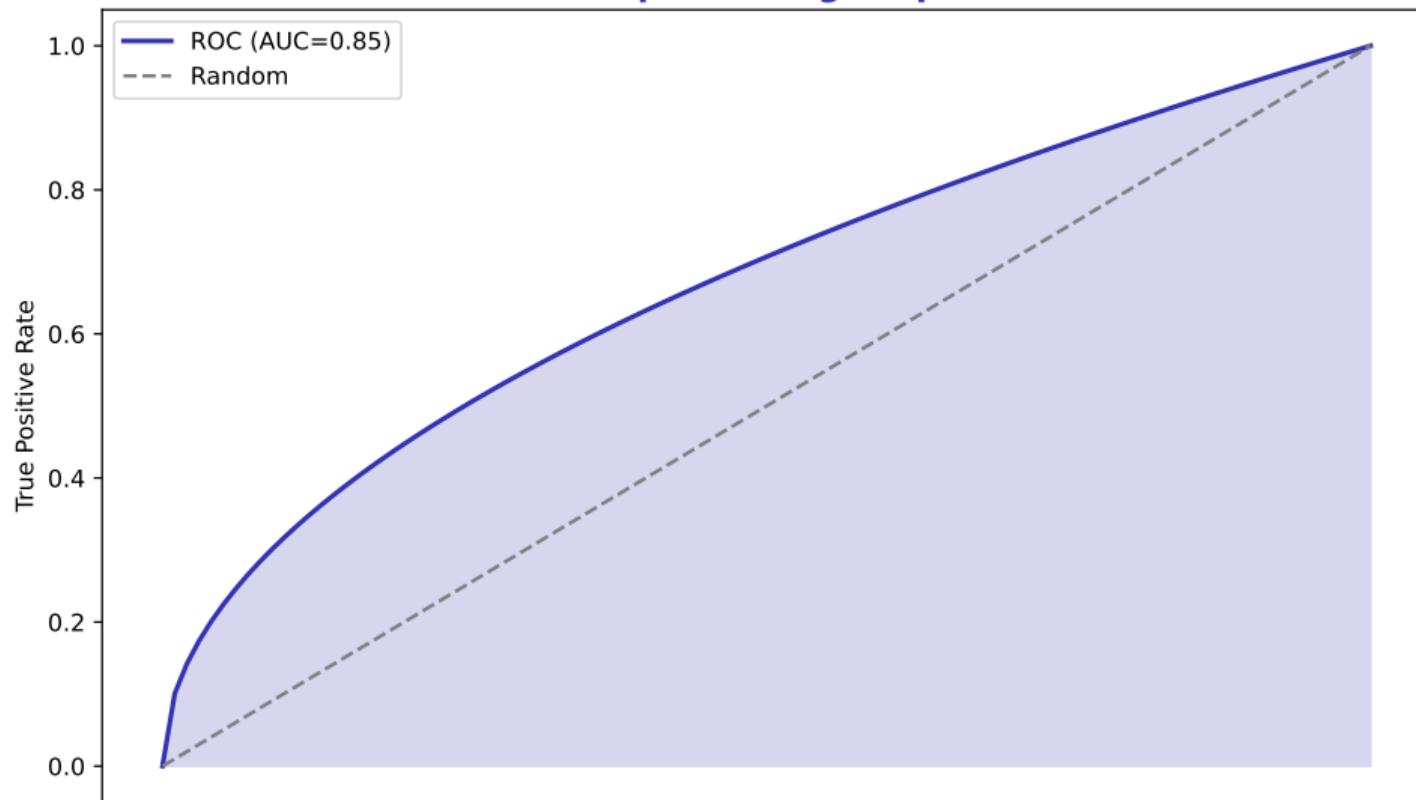
Pipeline Concept



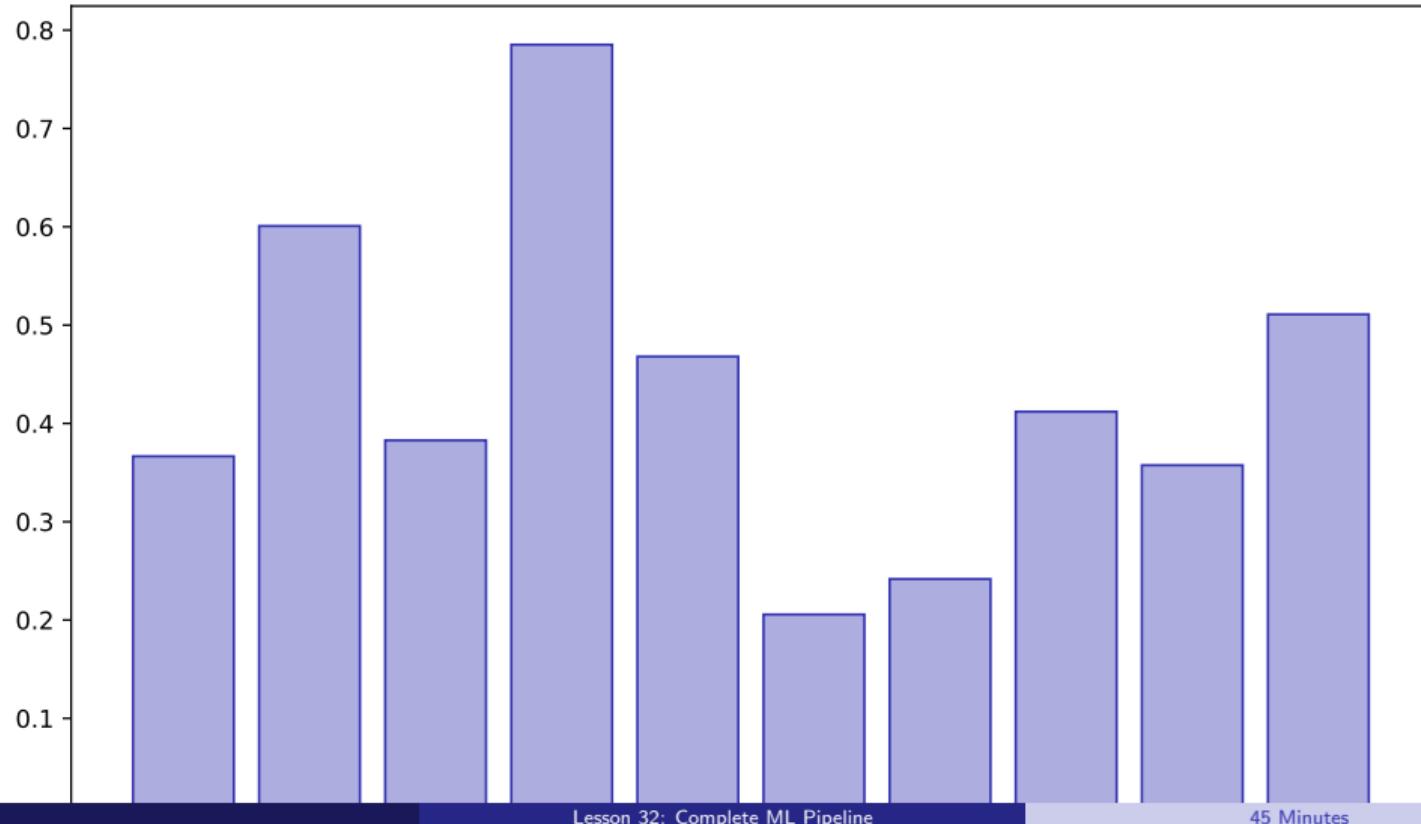
Sklearn Pipeline



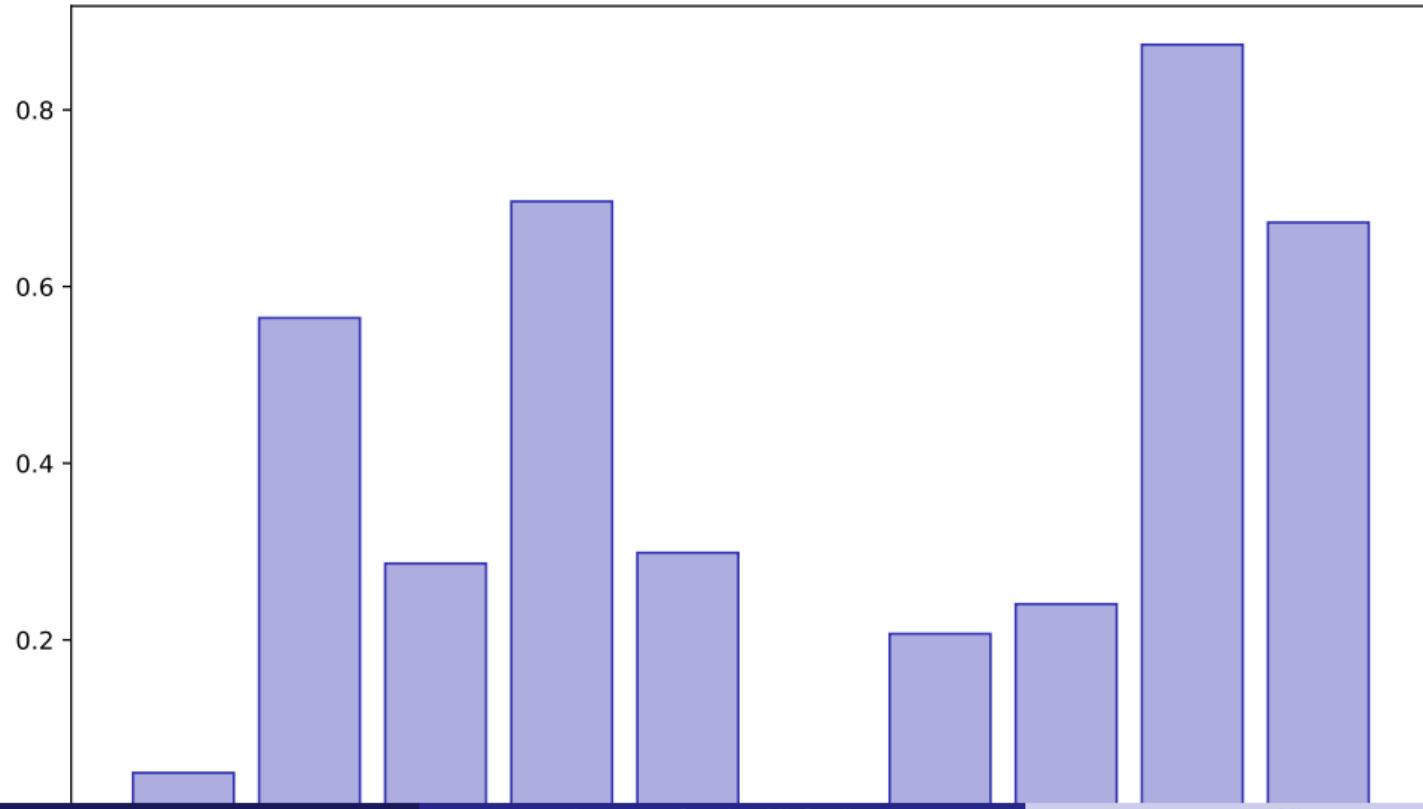
Preprocessing Steps



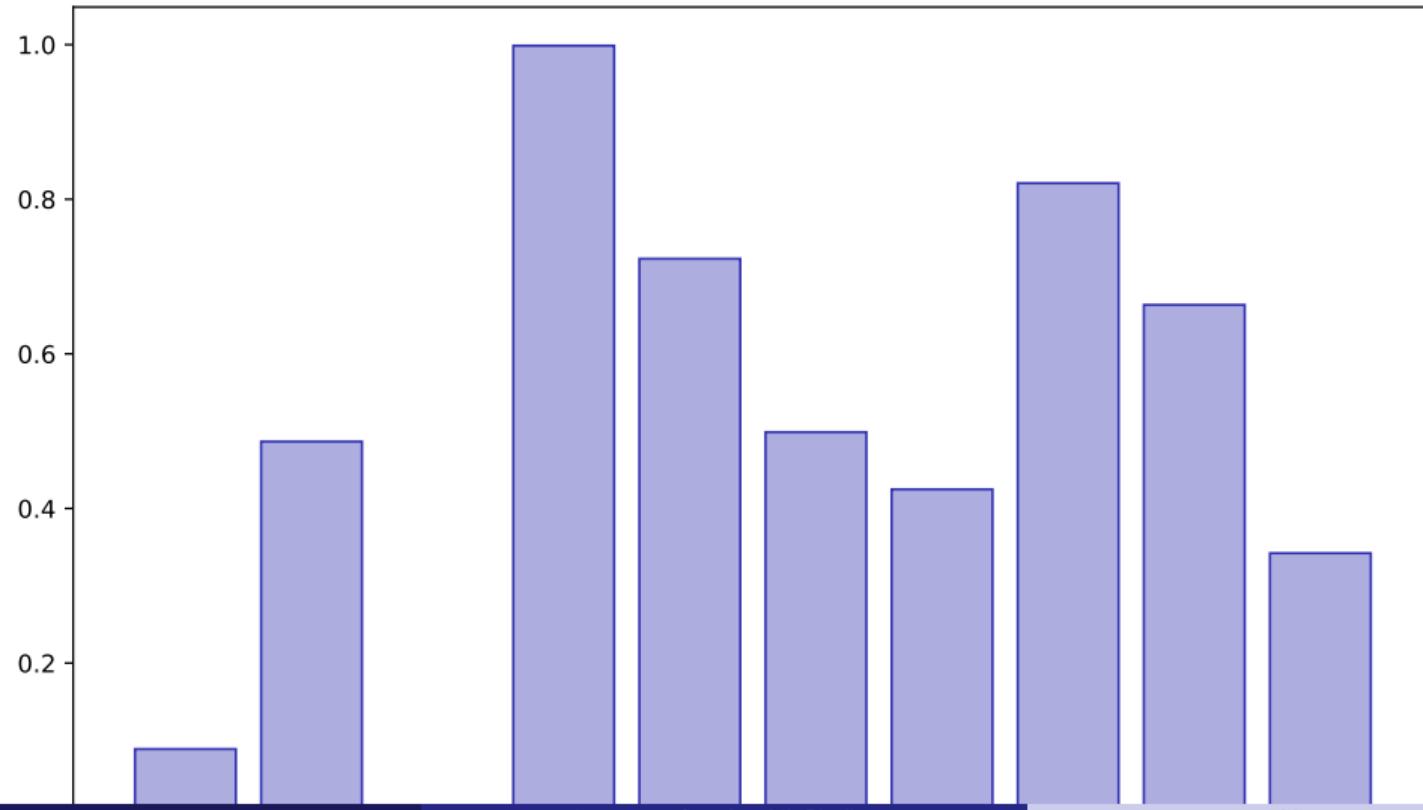
Cross Validation



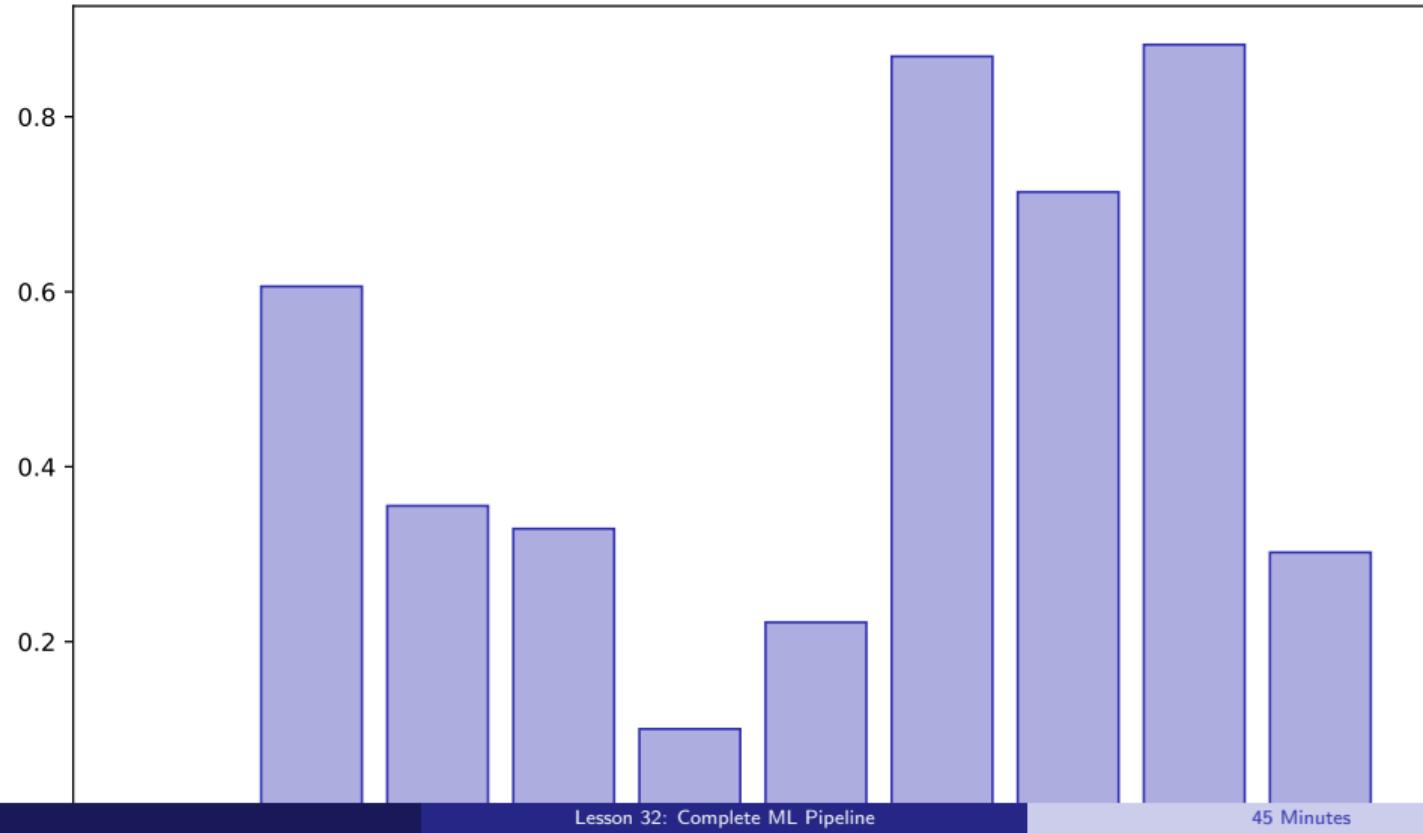
Grid Search



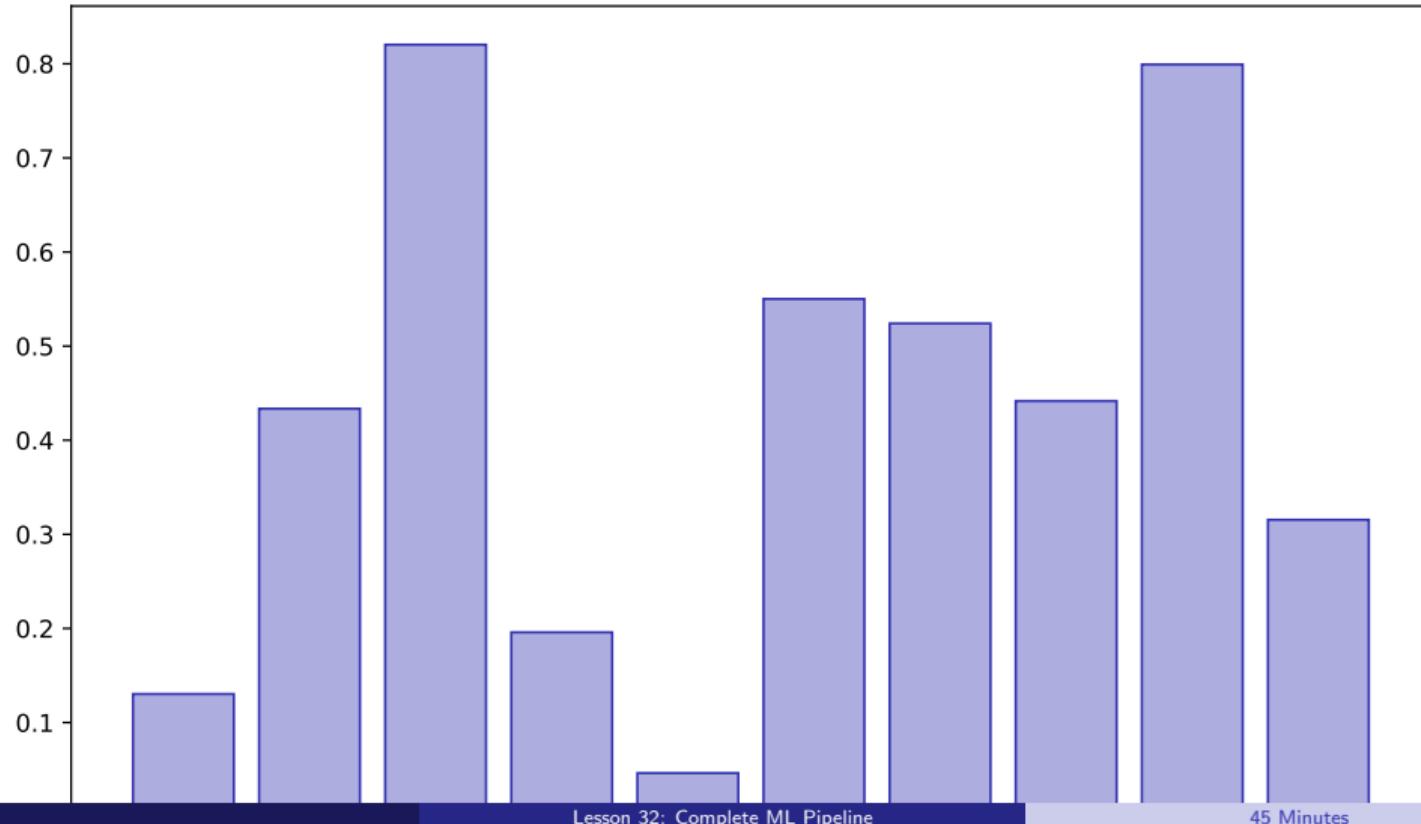
Random Search



Time Series Split



Production Pipeline



Key Takeaways:

- Build sklearn pipelines
- Apply cross-validation properly
- Tune hyperparameters
- Prevent data leakage

Apply these skills in your final project