

**Final Lab Exam**  
(Due on: December 27, 2019 at mid-night)

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You are given California census data and asked to build a ML model that learns from this data and then be able to predict the median housing price given all other metrics.

**Here is the checklist:**

**1. Get and Explore the data:**

- Study each feature and its characteristics (Name, Type ...etc.)
- Identify the target feature.
- Visualize the data.
- Study correlation between features.

**2. Prepare the data (Preprocessing):**

- Data cleaning.
- Feature selection.
- Feature engineering (discretize, decompose, ... etc.)
- Feature scaling.

*\*Note: you need to deal with categorical features.*

**3. Apply ML models:**

- Linear regression.
- Decision Trees.

**4. Fine-tune the system:**

- Fine-tune the hyperparameters using cross-validation.