**Deadline: Nov. 3rd. 5pm (15%)**

**Format Requirement:**

* **Max: 12 pages**
* **Single Spaced, 11pt**

**Notice: Client is not interested in Minor Details.**

**Report Requirement:**

* **5 different sets of predictions (2 for report)**
* **Other 3 sets of predictions should be from different models/ substantive variations thereof. (no need detailed describe)**

**Suggested Outline:**

**Introduction:**

**- Business Problem**

* Goal: Predict House sale prices
* Customer: City Government (Property prices is fundamental)
  + Information:
    - Up-to-date
    - Accurate
  + Aim:
    - Set taxes (Property taxes & stamp duties)
    - Public policy decision
    - Negotiate w/ property developers

**- Final Solution & Results**

**Data Processing:**

**- Potential issues**

* Different Data type & measurement scale: 78 + y
  + Nominal: **22**
  + Ordinal: **23**
  + Numerical: 33
    - Continuous: **19**
    - Discrete: **14**
* **Data Manipulation:**
  + Only few predictors matters
    - Distinguish:
  + Missing values appears
* Model w/ sufficient # of regressors: Decrease explanatory power. Hard to see a big picture.

**- Interesting facts**

**Feature Engineering:**

**Methodology:**

**- Model I – Regression (OLS)**

**- Reason:**

**- How to fit:**

**- Interpretation:**

**- Model II – Regularization (Ridge/Lasso/Elastic Net)**

**- Reason: Decrease variance, scarify bias.**

**- How to fit:**

**- Interpretation:**

**Validation Set:**

**- Results**

**- Other approach comparison**

**- Model III – Logistic Regression? / K-NN?**

**- Model IV – SVM?**

**- Model V – Decision Tree?**

**Final remarks:**