**House Prices - Advanced Regression Techniques**

Predict sales prices and practice feature engineering, RFs, and gradient boosting

## Dataset Description

## File descriptions

* **train.csv** - the training set
* **test.csv** - the test set
* **data\_description.txt** - full description of each column, originally prepared by Dean De Cock but lightly edited to match the column names used here
* **sample\_submission.csv** - a benchmark submission from a linear regression on year and month of sale, lot square footage, and number of bedrooms

## Data fields

Here's a brief version of what you'll find in the data description file.

* **SalePrice** - the property's sale price in dollars. This is the target variable that you're trying to predict.
* **MSSubClass**: The building class
* **MSZoning**: The general zoning classification
* **LotFrontage**: Linear feet of street connected to property
* **LotArea**: Lot size in square feet
* **Street**: Type of road access
* **Alley**: Type of alley access
* **LotShape**: General shape of property
* **LandContour**: Flatness of the property
* **Utilities**: Type of utilities available
* **LotConfig**: Lot configuration
* **LandSlope**: Slope of property
* **Neighborhood**: Physical locations within Ames city limits
* **Condition1**: Proximity to main road or railroad
* **Condition2**: Proximity to main road or railroad (if a second is present)
* **BldgType**: Type of dwelling
* **HouseStyle**: Style of dwelling
* **OverallQual**: Overall material and finish quality
* **OverallCond**: Overall condition rating
* **YearBuilt**: Original construction date
* **YearRemodAdd**: Remodel date
* **RoofStyle**: Type of roof
* **RoofMatl**: Roof material
* **Exterior1st**: Exterior covering on house
* **Exterior2nd**: Exterior covering on house (if more than one material)
* **MasVnrType**: Masonry veneer type
* **MasVnrArea**: Masonry veneer area in square feet
* **ExterQual**: Exterior material quality
* **ExterCond**: Present condition of the material on the exterior
* **Foundation**: Type of foundation
* **BsmtQual**: Height of the basement
* **BsmtCond**: General condition of the basement
* **BsmtExposure**: Walkout or garden level basement walls
* **BsmtFinType1**: Quality of basement finished area
* **BsmtFinSF1**: Type 1 finished square feet
* **BsmtFinType2**: Quality of second finished area (if present)
* **BsmtFinSF2**: Type 2 finished square feet
* **BsmtUnfSF**: Unfinished square feet of basement area
* **TotalBsmtSF**: Total square feet of basement area
* **Heating**: Type of heating
* **HeatingQC**: Heating quality and condition
* **CentralAir**: Central air conditioning
* **Electrical**: Electrical system
* **1stFlrSF**: First Floor square feet
* **2ndFlrSF**: Second floor square feet
* **LowQualFinSF**: Low quality finished square feet (all floors)
* **GrLivArea**: Above grade (ground) living area square feet
* **BsmtFullBath**: Basement full bathrooms
* **BsmtHalfBath**: Basement half bathrooms
* **FullBath**: Full bathrooms above grade
* **HalfBath**: Half baths above grade
* **Bedroom**: Number of bedrooms above basement level
* **Kitchen**: Number of kitchens
* **KitchenQual**: Kitchen quality
* **TotRmsAbvGrd**: Total rooms above grade (does not include bathrooms)
* **Functional**: Home functionality rating
* **Fireplaces**: Number of fireplaces
* **FireplaceQu**: Fireplace quality
* **GarageType**: Garage location
* **GarageYrBlt**: Year garage was built
* **GarageFinish**: Interior finish of the garage
* **GarageCars**: Size of garage in car capacity
* **GarageArea**: Size of garage in square feet
* **GarageQual**: Garage quality
* **GarageCond**: Garage condition
* **PavedDrive**: Paved driveway
* **WoodDeckSF**: Wood deck area in square feet
* **OpenPorchSF**: Open porch area in square feet
* **EnclosedPorch**: Enclosed porch area in square feet
* **3SsnPorch**: Three season porch area in square feet
* **ScreenPorch**: Screen porch area in square feet
* **PoolArea**: Pool area in square feet
* **PoolQC**: Pool quality
* **Fence**: Fence quality
* **MiscFeature**: Miscellaneous feature not covered in other categories
* **MiscVal**: $Value of miscellaneous feature
* **MoSold**: Month Sold
* **YrSold**: Year Sold
* **SaleType**: Type of sale
* **SaleCondition**: Condition of sale