Data Analysis with Python

Cheat Sheet: Data Wrangling

Package/Method	Description	Code Example

Replace missing data with frequency	Replace the missing values of the data set attribute with the mode common occurring entry in the column.	`MostFrequentEntry = df['attribute_name'].value_counts().idxmax()`
		`df['attribute_name'].replace(np.nan,MostFrequentEntry,>df['attribute_name'].replace(np.nan,MostFrequentEntry, inplace=True)`
		Copied!

Replace missing data with mean	Replace the missing values of the data set attribute with the mean of all the entries in the column.	`AverageValue=df['attribute_name'].astype(<data_type>).mean(axis=0)`
		`df['attribute_name'].replace(np.nan, AverageValue, inplace=True)`
		Copied!

Fix the data types	Fix the data types of the columns in the dataframe.	`df[['attribute1_name', 'attribute2_name', ...]] =`
		`df[['attribute1_name', 'attribute2_name', ...]].astype('data_type')`
		`#data_type is int, float, char, etc.`
		Copied!

Data Normalization	Normalize the data in a column such that the values are restricted between 0 and 1.	`df['attribute_name'] =`
		`df['attribute_name']/df['attribute_name'].max()`
		Copied!

Binning	Create bins of data for better analysis and visualization.	`bins = np.linspace(min(df['attribute_name']),`
		`max(df['attribute_name'],n)`
		`# n is the number of bins needed`
		`GroupNames = ['Group1','Group2','Group3,...]`
		`df['binned_attribute_name'] =`
		`pd.cut(df['attribute_name'], bins, labels=GroupNames, include_lowest=True)`
		Copied!

Change column name	Change the label name of a dataframe column.	`df.rename(columns={'old_name':\'new_name'}, inplace=True)` Copied!

Indicator Variables	Create indicator variables for categorical data.	`dummy_variable = pd.get_dummies(df['attribute_name'])`
		`df = pd.concat([df, dummy_variable],axis = 1)`
		Copied!

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