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.	1. 1 2. 2 1. MostFrequentEntry = df['attribute_name'].value_counts().idxmax() 2. 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.	1. 1 2. 2 1. AverageValue=df['attribute_name'].astype(<data_type>).mean(axis=0) 2. df['attribute_name'].replace(np.nan, AverageValue, inplace=True) Copied!
Fix the data types	Fix the data types of the columns in the dataframe.	1. 1 2. 2 3. 3 1. df[['attribute1_name', 'attribute2_name', ...]] = 2. df[['attribute1_name', 'attribute2_name', ...]].astype('data_type') 3. #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.	1. 1 1. df['attribute_name'] = df['attribute_name']/df['attribute_name'].max() Copied!
Binning	Create bins of data for better analysis and visualization.	1. 1 2. 2 3. 3 4. 4 5. 5 6. 6 1. bins = np.linspace(min(df['attribute_name']), 2. max(df['attribute_name'],n) 3. # n is the number of bins needed 4. GroupNames = ['Group1','Group2','Group3,...] 5. df['binned_attribute_name'] = 6. pd.cut(df['attribute_name'], bins, labels=GroupNames, include_lowest=True) Copied!
Change column name	Change the label name of a dataframe column.	1. 1 1. df.rename(columns={'old_name':\'new_name'}, inplace=True) Copied!
Indicator Variables	Create indicator variables for categorical data.	1. 1 2. 2 1. dummy_variable = pd.get_dummies(df['attribute_name']) 2. df = pd.concat([df, dummy_variable],axis = 1) Copied!

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