

EX_02

January 31, 2023

```
[2]: import pandas as pd
import seaborn as sns
import numpy as np
import matplotlib.pyplot as plt
import scipy.stats as stats

df = pd.read_csv('../data/flood.csv').set_index('uk_post_codes', drop=True)
df
```

```
[2]:
```

	claims	properties	amount_paid
uk_post_codes			
HD6 1	19	20	92180
HD6 2	1	1	5000
HD6 3	1	1	5000
HD6 4	5	5	12758
HX2 6	15	20	95384
HX2 8	1	2	10000
HX3 5	13	50	243402
HX3 6	1	1	891
HX3 7	2	2	7703
HX3 9	1	1	5000
HX4 0	1	9	45000
HX4 8	3	3	10500
HX5 0	6	7	35000
HX5 9	9	14	69932
HX6 1	4	4	15300
HX6 2	10	11	38558
HX6 3	51	52	227748
HX6 4	2	2	9500
HX7 5	51	78	363258
HX7 6	54	66	289082
HX7 7	10	10	46905
HX7 8	122	125	528462
OL14 5	21	21	94102
OL14 6	29	35	180500
OL14 7	42	42	193442
OL14 8	5	6	27098

```
[19]: corr = df.corr()
mask = np.zeros_like(corr, dtype=bool)
mask[np.triu_indices_from(mask)] = True
sns.set_style(style = 'white')
# Set up matplotlib figure
f, ax = plt.subplots(figsize=(11, 9))
# Add diverging colormap from red to blue
cmap = sns.diverging_palette(250, 10, as_cmap=True)
# Draw correlation plot with or without duplicates
sns.heatmap(
    corr,
    mask=mask,
    cmap=cmap,
    linewidth=.5,
    cbar_kws={"shrink": .5},
    ax=ax,
    annot=True
);
```



