

```
In [1]: %load_ext autoreload
%autoreload 2
%matplotlib inline

import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import matplotlib.gridspec as gridspec
import seaborn as sns

from hwl import regression
```

```
In [2]: X_train, y_train, X_test, y_test = regression.load_data('hw1/hw1-data')
print(X_train.shape)
print(y_train.shape)
print(X_test.shape)
print(y_test.shape)

(350, 7)
(350, 1)
(42, 7)
(42, 1)
```

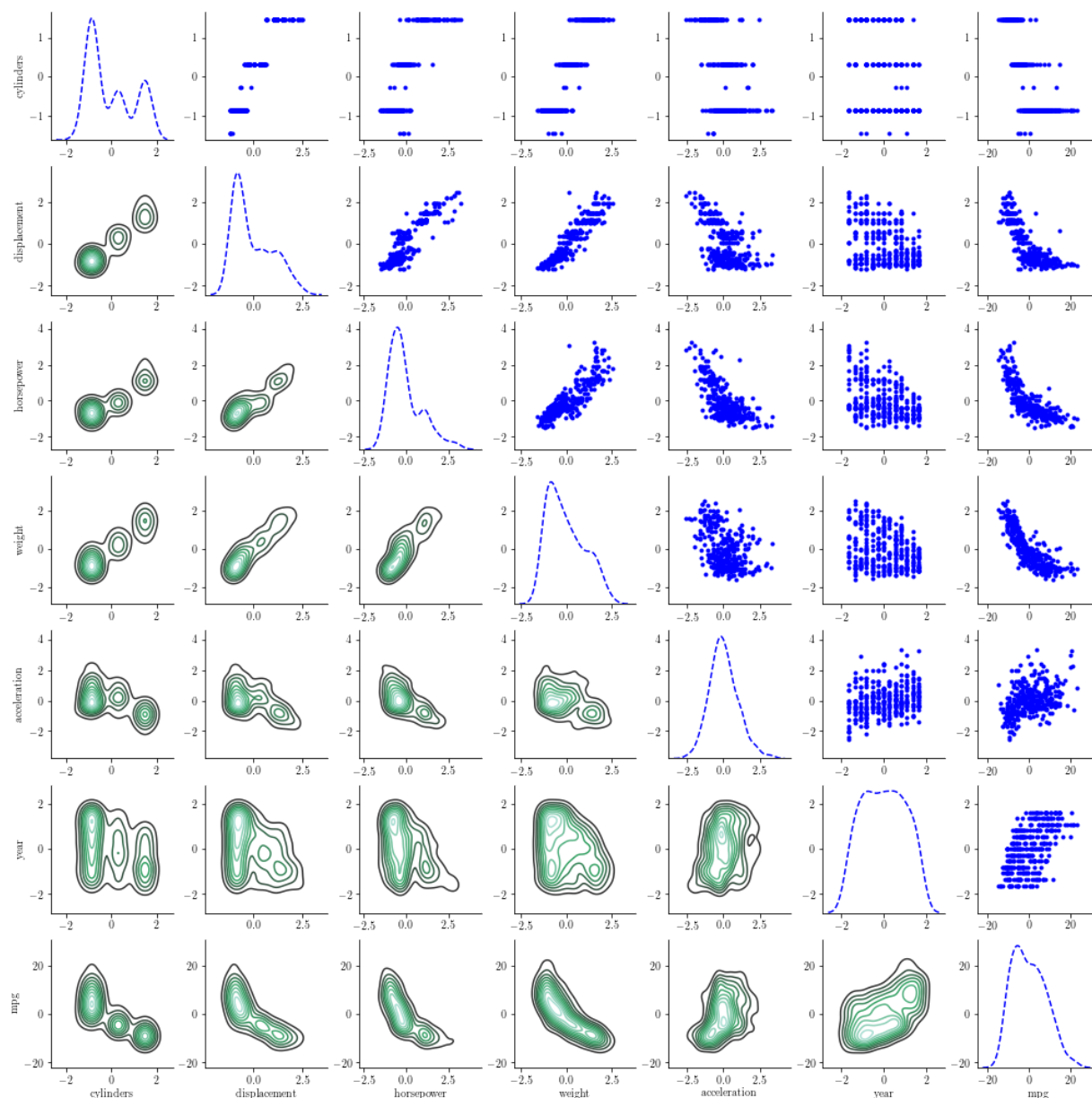
$\pi$

$\alpha, \alpha, \beta, \beta, \gamma, \Gamma, \pi, \Pi, \phi, \varphi, \mu, \Phi$

```
In [3]: regression.pairplot(regression.make_dataframe(X_train, y_train))
```

/Users/kmamykin/anaconda3/envs/heart/lib/python3.6/site-packages/matplotlib/lib/contour.py:967: UserWarning: The following kwargs were not used by contour: 'label', 'color'

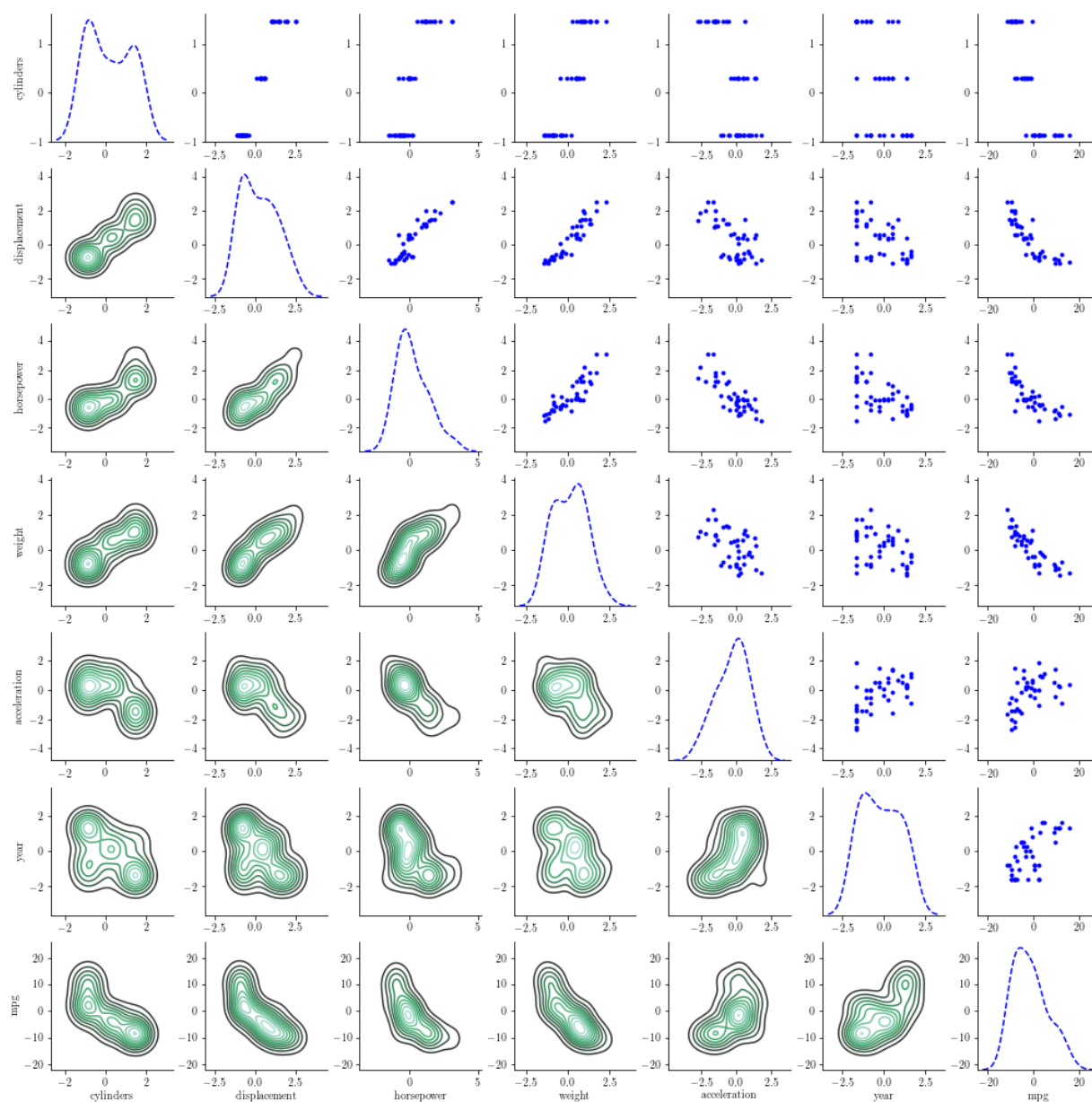
s)



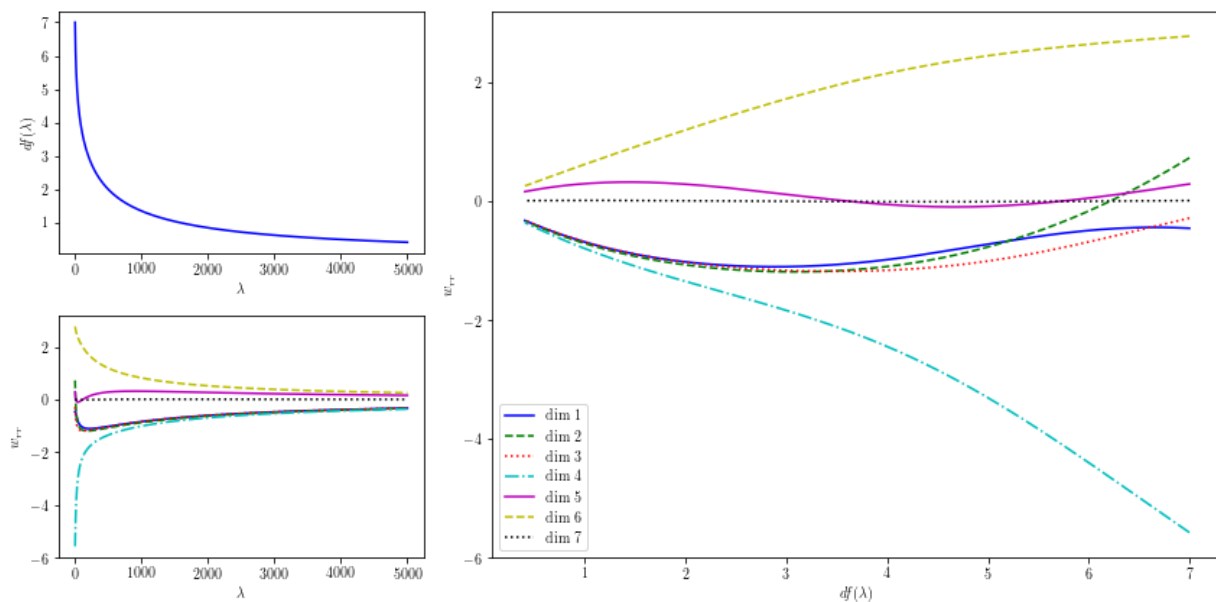
```
In [4]: regression.pairplot(regression.make_dataframe(X_test, y_test))
```

/Users/kmamykin/anaconda3/envs/heart/lib/python3.6/site-packages/matplotlib/contour.py:967: UserWarning: The following kwargs were not used by contour: 'label', 'color'

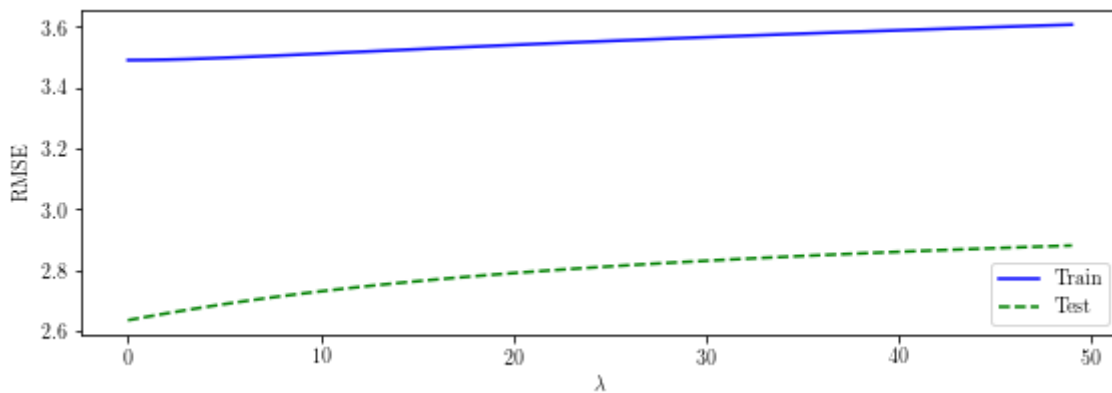
s)



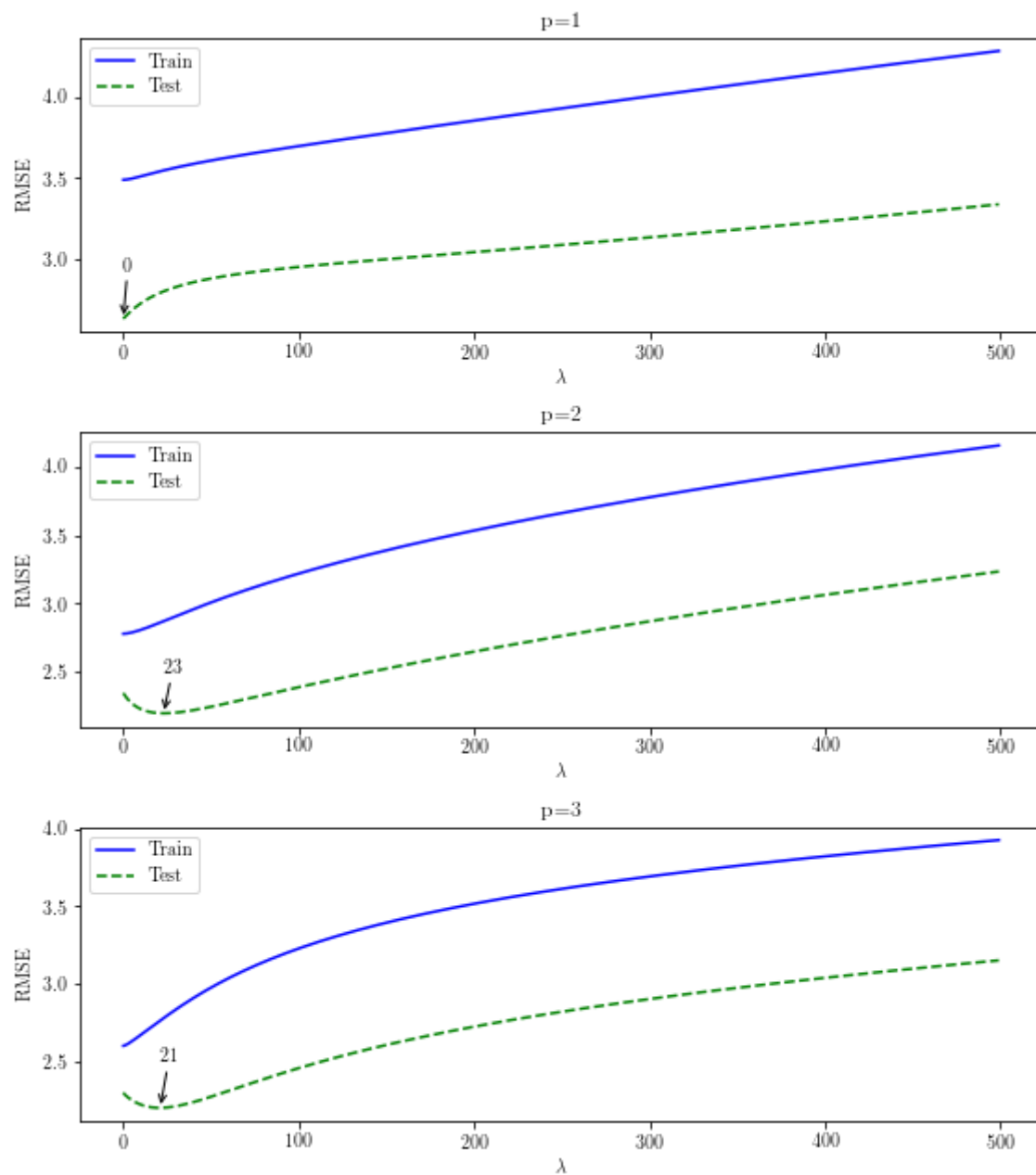
```
In [5]: regression.part1a()
```



```
In [8]: regression.part1c()
```



```
In [7]: regression.part2a()
```



## References

- Lars Buitinck et al, "API design for machine learning software: experiences from the scikit-learn project", <https://arxiv.org/pdf/1309.0238.pdf> (<https://arxiv.org/pdf/1309.0238.pdf>)