suvi2

August 10, 2021

[1]:
```
import pandas as pd
import numpy as np
import seaborn as sns
import matplotlib.pyplot as plt
import plotly.express as px
```

0.1 Import data

[2]:
```
eating = pd.read_csv('eating.csv')
date = eating.pop('date')
df_eating = pd.DataFrame({})
df_eating['date'] = date
df_eating['Quantity (oz.)'] = eating.fillna(0).transpose().cumsum().tail(1).
 ↪transpose()['qty.9']
```

[3]:
```
rx = pd.read_csv('rx.csv')
```

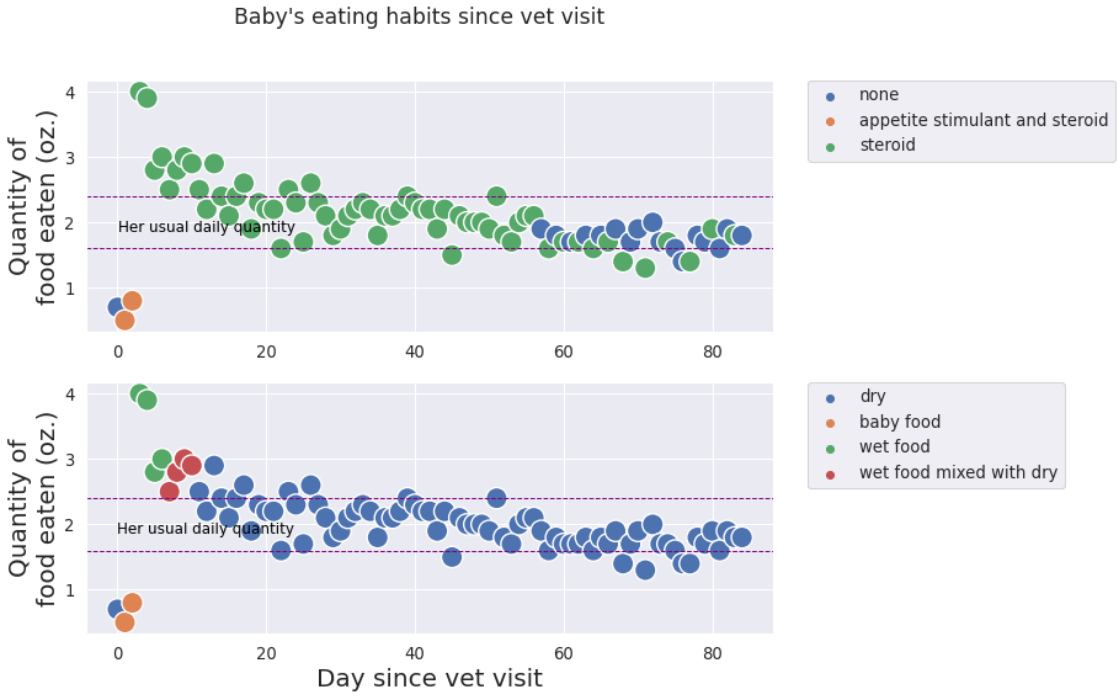
0.2 Merge data

[4]:
```
df_all = df_eating.merge(rx, left_on=['date'], right_on=['date'])
day_number = np.arange(len(df_all))
df_all['day since vet visit'] = day_number
#df_all.columns
#df_all['Quantity (oz.)'].tail(20)
```

0.3 Plot eating data

[5]:
```
sns.set(font_scale = 1.2)
fig, axes = plt.subplots(2,1, sharey=True)
fig.suptitle('Baby\'s eating habits since vet visit')
sns.scatterplot(ax = axes[0], data=df_all, y="Quantity (oz.)", x="day since vet␣
 ↪visit", hue = 'rx', s=300)
axes[0].legend(bbox_to_anchor=(1.05, 1), loc=2, borderaxespad=0.)
axes[0].axhline(1.6, color='purple', linewidth = 1, linestyle='--')
axes[0].axhline(2.4, color='purple', linewidth = 1, linestyle='--')
```

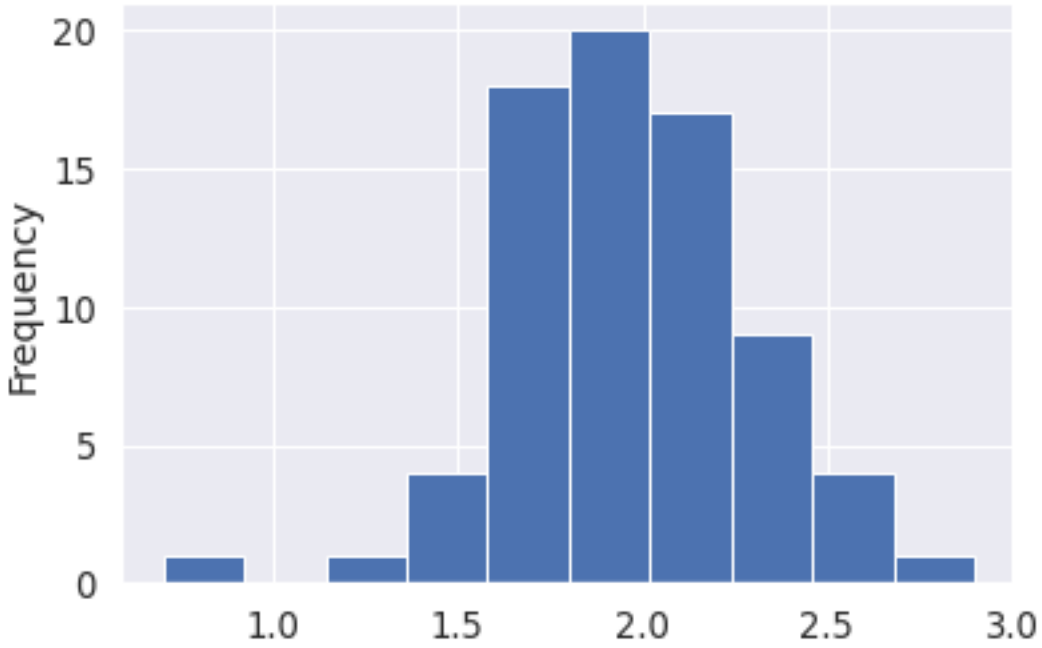
```
axes[0].text(0.1, 1.85, "Her usual daily quantity", horizontalalignment='left',␣
 ↪size='small', color='black')
axes[0].set_xlabel(' ', fontsize=20)
axes[0].set_ylabel('Quantity of\nfood eaten (oz.)', fontsize=20)
#axes[0].legend(loc='lower right')
sns.scatterplot(ax = axes[1], data=df_all, y="Quantity (oz.)", x="day since vet␣
 ↪visit", hue = 'type of food',
                s=300)
#plt.legend(loc='lower right')
axes[1].legend(bbox_to_anchor=(1.05, 1), loc=2, borderaxespad=0.)
axes[1].axhline(1.6, color='purple', linewidth = 1, linestyle='--')
axes[1].axhline(2.4, color='purple', linewidth = 1, linestyle='--')
axes[1].text(0., 1.85, "Her usual daily quantity", horizontalalignment='left',␣
 ↪size='small', color='black')
axes[1].set_xlabel('Day since vet visit', fontsize=20)
axes[1].set_ylabel('Quantity of\nfood eaten (oz.)', fontsize=20)
fig.set_size_inches(10, 8.27)

plt.savefig('./baby.png')
```



0.4 Describe combinations of different medication regimen and food type

[27]:
```
df_all[((df_all['rx'] == 'none') | (df_all['rx'] == 'steroid')) & (df_all['type␣
 ↪of food'] == 'dry')]['Quantity (oz.)'].plot.hist()
df_all[((df_all['rx'] == 'none') | (df_all['rx'] == 'steroid')) & (df_all['type␣
 ↪of food'] == 'dry')]['Quantity (oz.)'].describe()
```

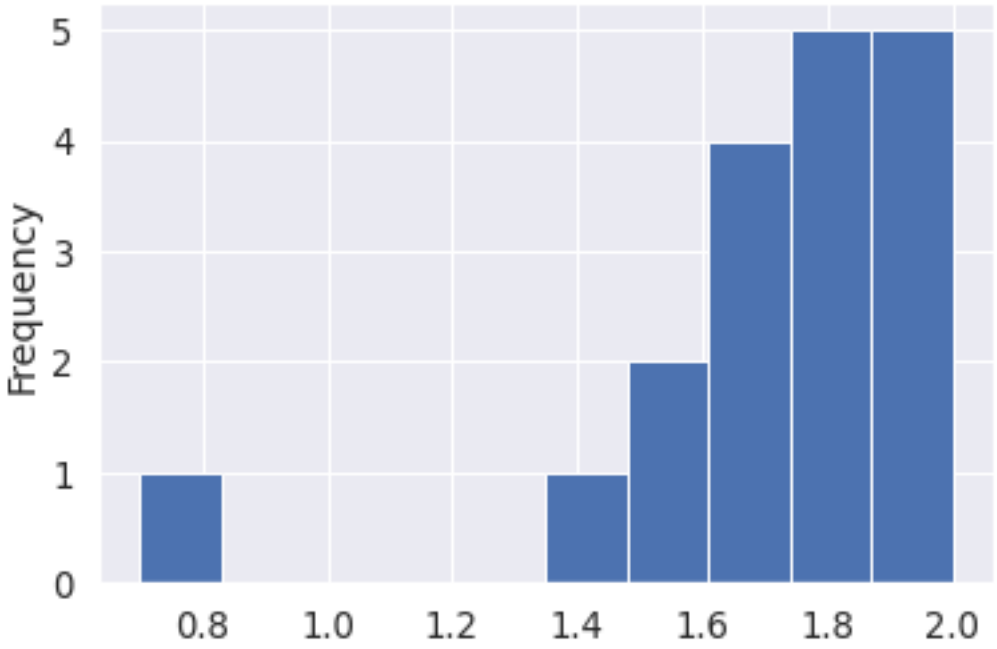
[27]:
```
count    75.000000
mean      1.957333
std       0.350356
min       0.700000
25%       1.700000
50%       1.900000
75%       2.200000
max       2.900000
Name: Quantity (oz.), dtype: float64
```



[29]:
```
df_all[((df_all['rx'] == 'none') ) & (df_all['type of food'] ==␣
 ↪'dry')]['Quantity (oz.)'].plot.hist()
df_all[((df_all['rx'] == 'none') ) & (df_all['type of food'] ==␣
 ↪'dry')]['Quantity (oz.)'].describe()
```

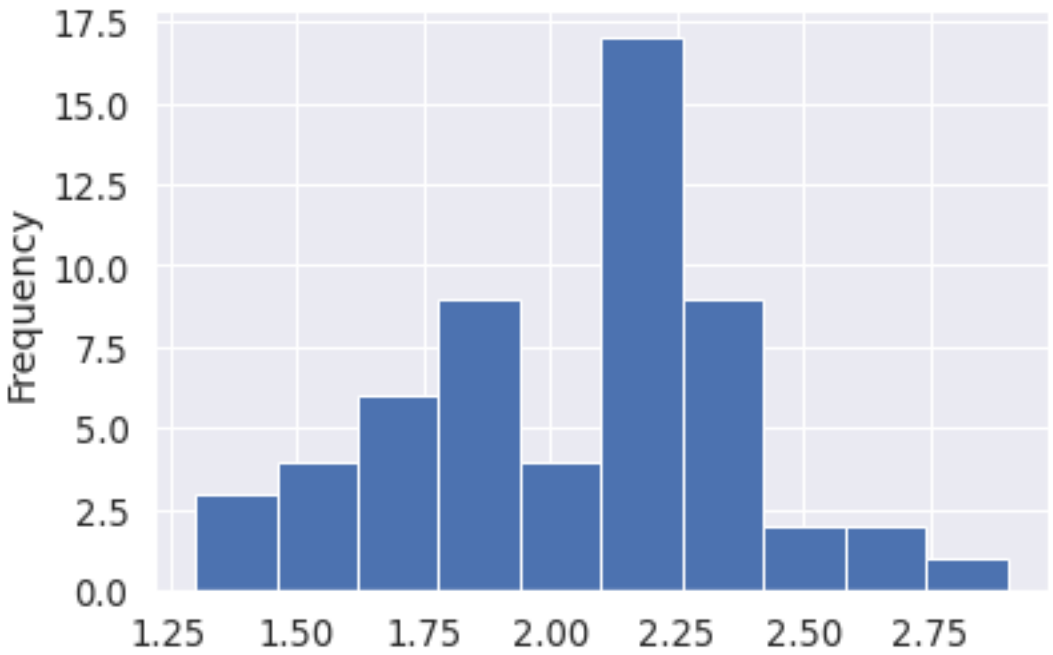
[29]:
```
count    18.000000
mean      1.705556
std       0.287938
```

```
min       0.700000
25%       1.700000
50%       1.800000
75%       1.875000
max       2.000000
Name: Quantity (oz.), dtype: float64
```



[30]:
```
df_all[((df_all['rx'] == 'steroid') ) & (df_all['type of food'] ==␣
 ↪'dry')]['Quantity (oz.)'].plot.hist()
df_all[((df_all['rx'] == 'steroid') ) & (df_all['type of food'] ==␣
 ↪'dry')]['Quantity (oz.)'].describe()
```

[30]:
```
count    57.000000
mean      2.036842
std       0.332002
min       1.300000
25%       1.800000
50%       2.100000
75%       2.200000
max       2.900000
Name: Quantity (oz.), dtype: float64
```



[14]:
```
df_all.columns
```

[14]:
```
Index(['date', 'Quantity (oz.)', 'type of food', 'rx', 'day since vet visit'],
dtype='object')
```

[ ]:
```

```