svm2

October 22, 2019

In [2]:
```
%matplotlib inline
import pandas as pd
import numpy as np
from sklearn import svm
import matplotlib.pyplot as plt
import seaborn as sns; sns.set(font_scale=1.2)
```

In [3]:
```
data = pd.read_csv('house_sizes_prices_svm.csv')
```

In [4]:
```
sns.lmplot('size', 'price',
           data=data,
           hue='sold',
           palette='Set2',
           fit_reg=False,
           scatter_kws={"s": 50});

X = data[['size', 'price']].values
y = np.where(data['sold']=='y',1,0)
model = svm.SVC(kernel='linear').fit(X, y)

x_min, x_max = X[:, 0].min()-1, X[:, 0].max()+1
y_min, y_max = X[:, 1].min()-1, X[:, 1].max()+1
h=(x_max / x_min)/20
xx, yy = np.meshgrid(np.arange(x_min, x_max, h),
                     np.arange(y_min, y_max, h))
Z = model.predict(np.c_[xx.ravel(), yy.ravel()])
Z = Z.reshape(xx.shape)
plt.contourf(xx, yy, Z, cmap=plt.cm.Blues, alpha=0.3)

plt.xlabel('Size of house')
plt.ylabel('Asking price(1000s)')
plt.title("Size of Houses and Their Aksing Prices")
```

Out[4]:
```
Text(0.5, 1.0, 'Size of Houses and Their Aksing Prices')
```


Size of Houses and Their Aksing Prices
Asking price(1000s)
500
400
300
200
100
500
1000
1500
2000
2500
3000
Size of house
sold
y
n

In [ ]: