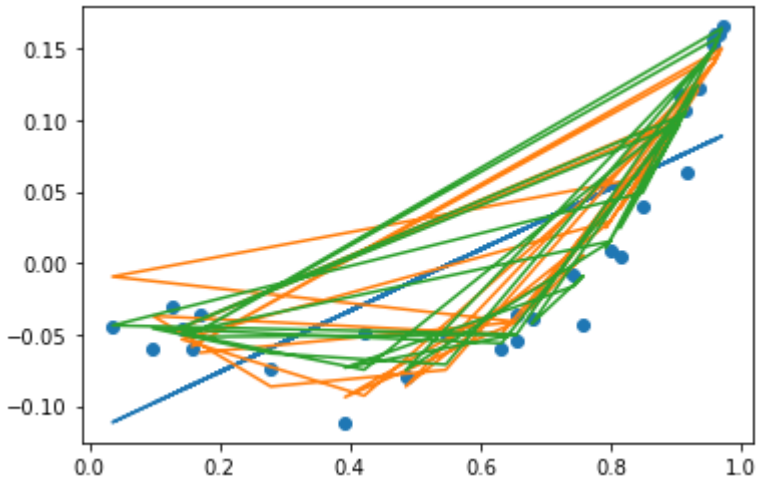
In [1]:

```
import numpy as np
import scipy.io as sp
import matplotlib.pyplot as plt

data = sp.loadmat('polydata.mat')
#print data
x = data['a'].flatten()
y = data['b'].flatten()
plt.scatter(x,y)
coeff1 = np.polyfit(x,y,1)
poly1 = np.polyval(coeff1, x)
plt.plot(x,poly1)
coeff2 = np.polyfit(x,y,2)
poly2 = np.polyval(coeff2, x)
plt.plot(x,poly2)
coeff3 = np.polyfit(x,y,3)
poly3 = np.polyval(coeff3, x)
plt.plot(x,poly3)
plt.show
```

Out[1]:

```
<function matplotlib.pyplot.show(*args, **kw)>
```



In [ ]: