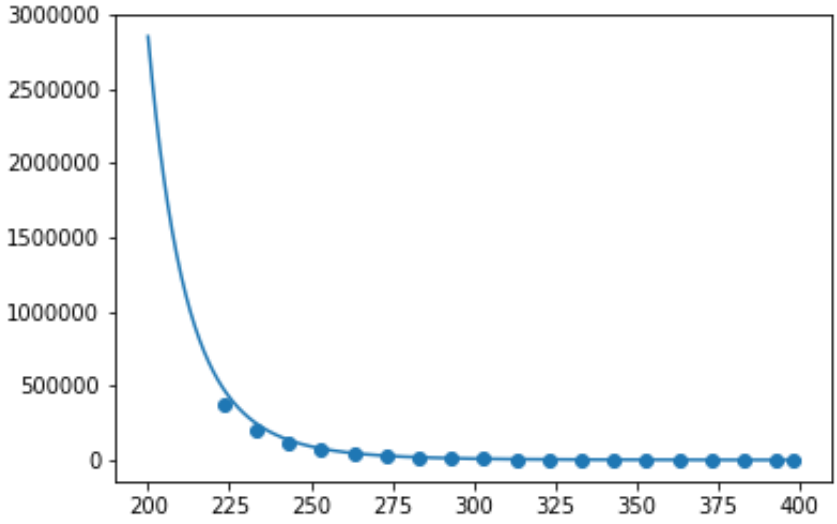
In [1]:
```
import numpy as np
import matplotlib.pyplot as plt
from scipy.optimize import curve_fit
%matplotlib
```

```
Using matplotlib backend: Qt5Agg
```

In [2]:
```
T1 = np.array([-50, -40, -30, -20, -10, 0, 10, 20, 30, 40, 50, 60,
70, 80, 90, 100, 110, 120, 125], dtype=np.float64)+273.15
R1 = np.array([367.7, 204.7, 118.5, 71.02, 43.67, 27.70, 18.07, 12.
11, 8.301, 5.811, 4.147, 3.011, 2.224, 1.668, 1.267, 0.9753, 0.7597
, 0.5981, 0.5331], dtype=np.float64)*10**3

T = np.linspace(200, 400, 1000)

R0 = 10*10**3
T0 = 298.15
B = 3435
R = R0*np.exp(B*(1/T-1/T0))
plt.scatter(T1, R1)
plt.plot(T, R)
plt.show()
```



In [50]:
```
R0 = 10*10**3
T0 = 298.15
B = 3435
R = R0*np.exp(B*(1/311.9083-1/T0))

print(R)
```

```
6015.80886292975
```

The temperature we are using now is 306.9083K(7.198kΩ), we did the measurement every 0.5 degree with a range of +/- 5 degrees.

Temperature(K)	**Resister(KΩ)**	**Temperature(K)**	**Resister(KΩ)**
306.9083	7.198	307.4083	7.068
306.4083	7.331	307.9083	6.941
305.9083	7.466	308.4083	6.817
305.4083	7.605	308.9083	6.695
304.9083	7.746	309.4083	6.576
304.4083	7.891	309.9083	6.459
303.9083	8.038	310.4083	6.345
303.4083	8.190	310.9083	6.233
302.9083	8.345	311.4083	6.123
302.4083	8.502	311.9083	6.016
301.9083	8.664	-	-