Summary

I was originally aiming for my program to automagically decrypt the cipher text, but I opted for the simpler approach of providing myself tools to assist in the decryption. That being said, my program still does most of the work. The only step you have to do fully manual is figure out where to place the spaces in the decrypt. The main tools my program provides are:

- Ranking all possible key lengths. This tool uses the process given in section 2.3.1 of Introduction to Cryptography by Trappe and Washington.
- Predicting the most likely key for a given key length, assuming English letter frequencies. This tool uses the process given in section 2.3.3 of Introduction to Cryptography by Trappe and Washington.
- Decrypting the cipher text with a given key.

More in-depth details about implementation can be found in the program documentation, notably the documentation in src/VigenereCipherText.java.

Final Results

Cipher text:
```
XKJUROWMLLPXWZNPIMBVBQJCNOWXPCCHHVVFVSLLFVXHAZITYXOHULXQOJAXELXZXMY
JAQFSTSRULHHUCDSKBXKNJQIDALLPQSLLUHIAQFPBPCIDSVCIHWHWEWTHBTXRLJNRSN
CIHUVFFUXVOUKJLJSWMAQFVJWJSDYLJOGJXDBOXAJULTUCPZMPLIWMLUBZXVOODYBAF
DSKXGQFADSHXNXEHSARUOJAQFPFKNDHSAAFVULLUWTAQFRUPWJRSZXGPFUTJQIYNRXN
YNTWMHCUKJFBIRZSMEHHSJSHYONDDZZNTZMPLILRWNMWMLVURYONTHUHABWNVW
```

Key:
```
BDFHJ
```

Decrypt:
```
WHENINTHECOURSEOFHUMANEVENTSITBECOMESNECESSARYFORONEPEOPLETODISSOLV
ETHEPOLITICALBANDSWHICHHAVECONNECTEDTHEMWITHANOTHERANDTOASSUMEAMONG
THEPOWERSOFTHEEARTHTHESEPARATEANDEQUALSTATIONTOWHICHTHELAWSOFNATURE
ANDOFNATURESGODENTITLETHEMADECENTRESPECTTOTHEOPINIONSOFMANKINDREQUI
RESTHATTHEYSHOULDDECLARETHECAUSESWHICHIMPELTHEMTOTHESEPARATION
```

Decrypt with spaces and punctuation added and correct case:
```
When in the course of human events it becomes necessary for one people
to dissolve the political bands which have connected them with another
and to assume among the powers of the earth, the separate and equal
station to which the Laws of Nature and of Nature's God entitle them,
a decent respect to the opinions of mankind requires that they should
declare the causes which impel them to the separation.
```

The decrypt is the first sentence of the Declaration of Independence.