

加密过程：

普通模拟，略；

解密过程：

第一步，采用一定样本进行训练，整合出高频词。这里我用 nature、science、Time 上的一些文章、《百年孤独》英文版节选大约一万多个单词为样本进行训练，整合出前 1000 的高频词。

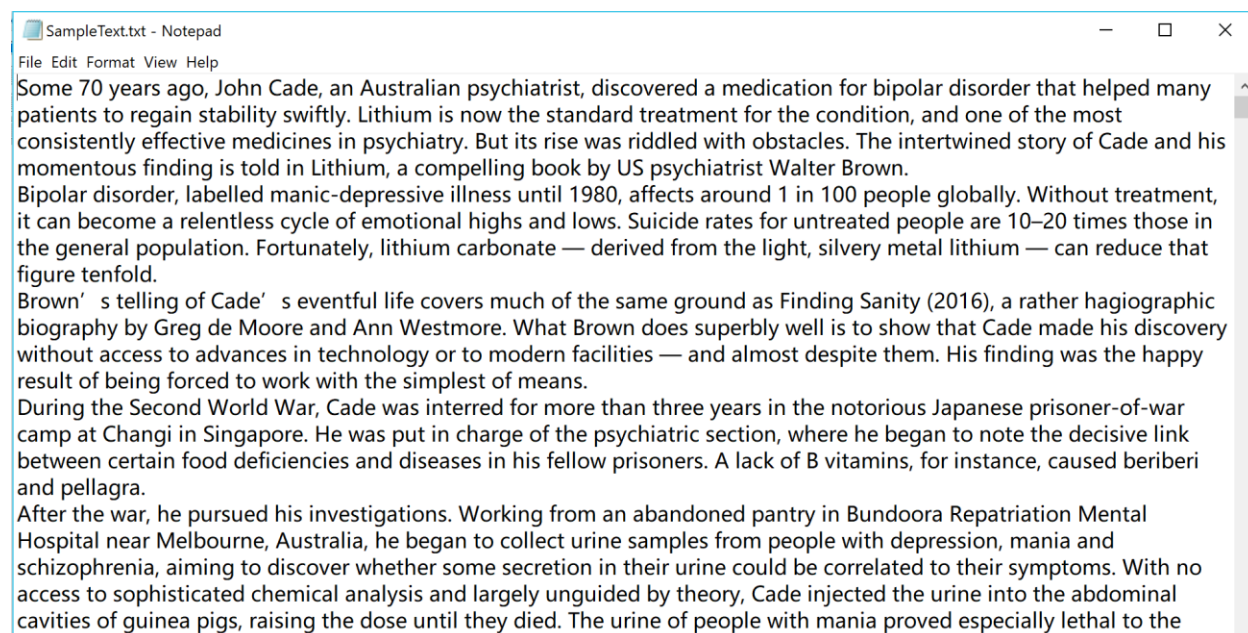


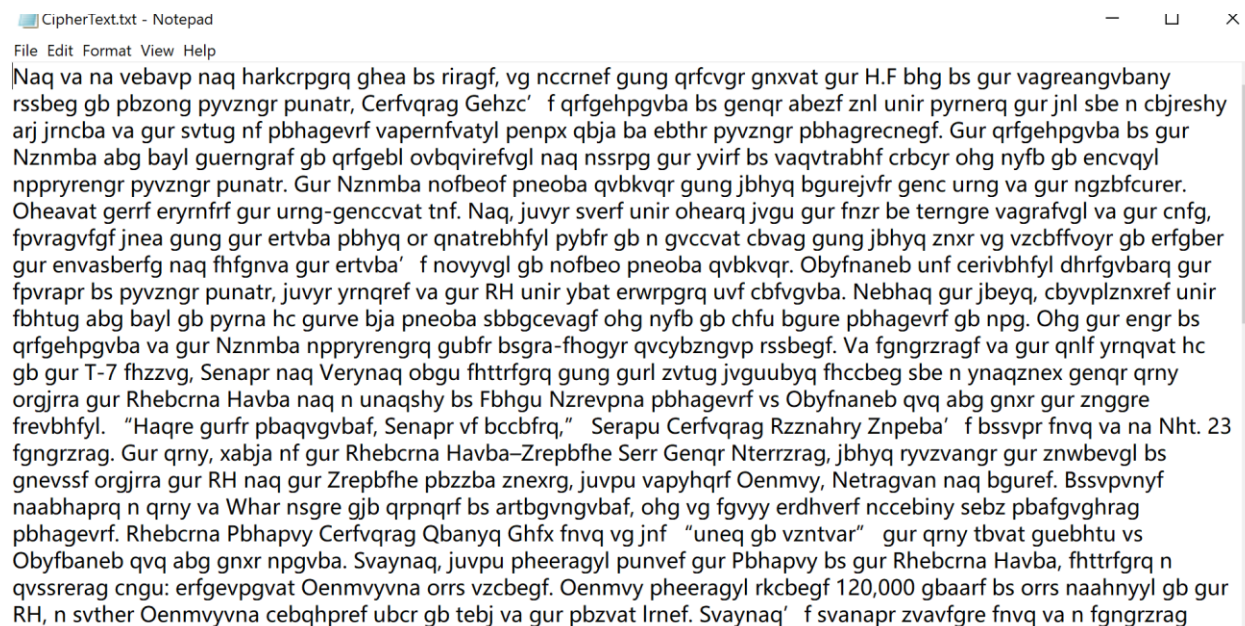
Figure 1 训练样本



Figure 2 前 1000 高频词

具体训练过程就是对样本 hash 然后计数，想法比较简单。

第二步，利用训练出来的高频词集进行解密，具体操作就是对密文进行 25 次 k 值尝试破译，每一次破译计算出高频词破解的次数，最后选取高频词破解次数最多的 k 作为密钥，因为凯撒密码较为简单，所以在密文足够长的情况下正确率可以达到百分之百。

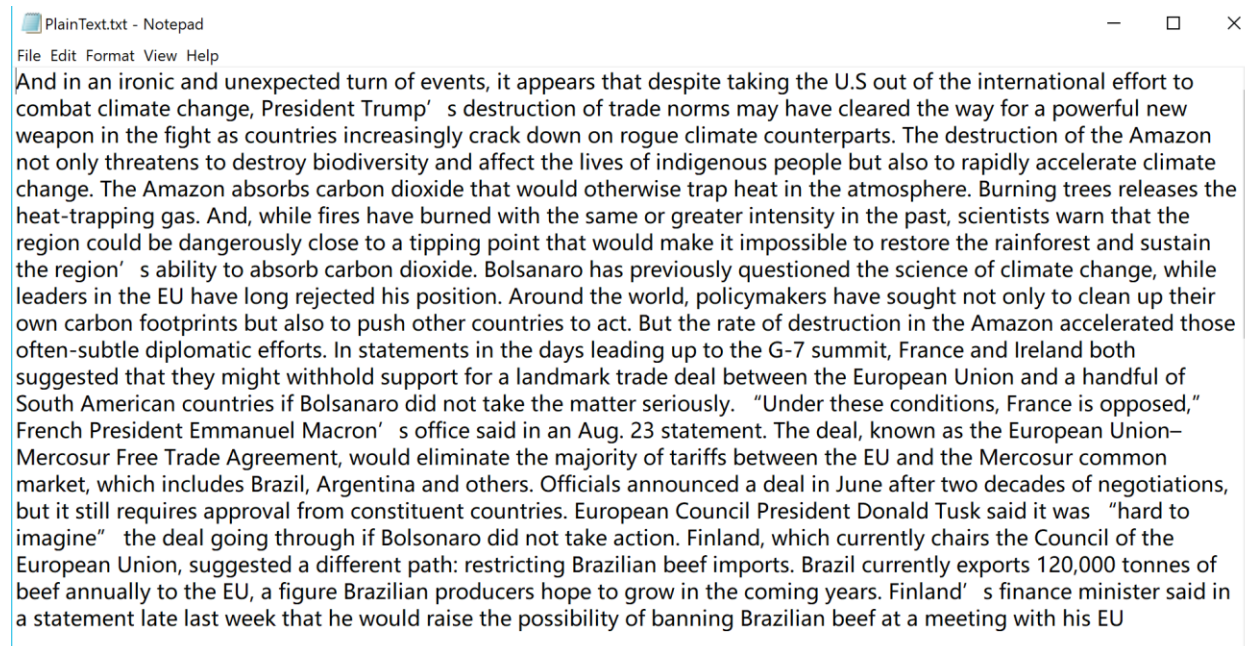


CipherText.txt - Notepad

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Naq va na vebavp naq harkcrprgrq ghea bs riragf, vg nccrnf gung qrfcvgr gnxvat gur H.F bhg bs gur vagreangvbany rssbeg gb pbzong pyvzng punatr, Cerfvrag Gehzc' f qrfgehpvgba bs genqr abezf znl unir pyrnerq gur jnl sbe n cbjreshy arj jrnmba va gur svtug nf pbhagevrf vapernfvatyl penpx qbja ba ebthr pyvzng pbhagrecnegf. Gur qrfgehpvgba bs gur Nznmba abg bayl guerngraf gb qrfgebl ovbqvirefvgf naq nssrpg gur yvirf bs vaqvttrabhf crbcyr ohg nyfb gb encvqyl nppryreng pyvzng punatr. Gur Nznmba nofboef pneoba qvbkvqr gung jbhyyq bgurejvfr genc urng va gur ngzbfcurer. Oheavat gerrf erynrfrf gur urng-genccvat tnf. Naq, juvyr sverf unir ohearq jvgu gur fnzr be terngre vagravfvgf va gur cnfg, fpvragvfgf jnea gung gur ertvba pbhyq or qnatrebhfyl pybfr gb n gvccvat cbvag gung jbhyyq znxr vg vzcbffvoyr gb erfger gur envasberfg naq fhfgnva gur ertvba' f novyvgf gb nofboef pneoba qvbkvqr. Obyfnaneb unf cerivbhfyl dhrfgvbarq gur fpvrpr bs pyvzng punatr, juvyr yrnqref va gur RH unir ybat erwrprgrq uvf cbfvgvba. Nebhaq gur jbeyq, cbyvplznxref unir fbhtug abg bayl gb pyrna hc gurve bja pneoba sbbgcevagf ohg nyfb gb chfu bgure pbhagevrf gb npg. Ohg gur engr bs qrfgehpvgba va gur Nznmba nppryrengr gubfr bsgra-fhogyr qvcybzngvp rssbegf. Va fgnggrzagf va gur qnlf yrnqvaf hc gb gur T-7 fhzzvg, Senapr naq Verrya obgu fhtrfgrq gung gurl zvtug jvguubyq fhccbeg sbe n ynaqznex genqr qrny orgjrra gur Rhebcna Havba naq n unaqshy bs Fbhgu Nzrevpna pbhagevrf vs Obyfnaneb qvq abg gnxr gur znggre frevbhfyf. "Haqre gurfr pbaqvgvbaf, Senapr vf bccbfqr," Serapu Cerfvrag Rzznahyr Znpeba' f bssvpr fnvq va na Nht. 23 fgnggrzag. Gur qrny, xabja nf gur Rhebcna Havba-Zrepbfhe Serr Genqr Nterrzag, jbhyyq ryvzvagr gur znwbevgf bs gnevssf orgjrra gur RH naq gur Zrepbfhe pbzba znexrg, juvpu vapyhrf Oenmvy, Netragvan naq bguref. Bssvprnyf naabhaprq n qrny va Whar nsgrg gjb qrpnrqf bs artbgvngvbaf, ohg vg fgvyv erdhverf nccebyny sebz pbafigvghrag pbhagevrf. Rhebcna Pbhapvy Cerfvrag Qbanyq Ghfx fnvq vg jnf "uneq gb vzntvar" gur qrny tbvat guebhtu vs Obyfbaneb qvq abg gnxr npgvba. Svaynaq, juvpu pheeragyl punvef gur Pbhapvy bs gur Rhebcna Havba, fhtrfgrq n qvssrerag cngu: erfgevgvat Oenmvyvna orrs vzcbegf. Oenmvy pheeragyl rkbegf 120,000 gbaarf bs orrs naahnyyl gb gur RH, n svther Oenmvyvna cebqhprf ubcr gb tejv va gur pbzvat lnef. Svaynaq' f svanapr zvavfgrg fnvq va n fgnggrzag

Figure 3 密文



PlainText.txt - Notepad

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And in an ironic and unexpected turn of events, it appears that despite taking the U.S out of the international effort to combat climate change, President Trump' s destruction of trade norms may have cleared the way for a powerful new weapon in the fight as countries increasingly crack down on rogue climate counterparts. The destruction of the Amazon not only threatens to destroy biodiversity and affect the lives of indigenous people but also to rapidly accelerate climate change. The Amazon absorbs carbon dioxide that would otherwise trap heat in the atmosphere. Burning trees releases the heat-trapping gas. And, while fires have burned with the same or greater intensity in the past, scientists warn that the region could be dangerously close to a tipping point that would make it impossible to restore the rainforest and sustain the region' s ability to absorb carbon dioxide. Bolsanaro has previously questioned the science of climate change, while leaders in the EU have long rejected his position. Around the world, policymakers have sought not only to clean up their own carbon footprints but also to push other countries to act. But the rate of destruction in the Amazon accelerated those often-subtle diplomatic efforts. In statements in the days leading up to the G-7 summit, France and Ireland both suggested that they might withhold support for a landmark trade deal between the European Union and a handful of South American countries if Bolsanaro did not take the matter seriously. "Under these conditions, France is opposed," French President Emmanuel Macron' s office said in an Aug. 23 statement. The deal, known as the European Union-Mercosur Free Trade Agreement, would eliminate the majority of tariffs between the EU and the Mercosur common market, which includes Brazil, Argentina and others. Officials announced a deal in June after two decades of negotiations, but it still requires approval from constituent countries. European Council President Donald Tusk said it was "hard to imagine" the deal going through if Bolsonaro did not take action. Finland, which currently chairs the Council of the European Union, suggested a different path: restricting Brazilian beef imports. Brazil currently exports 120,000 tonnes of beef annually to the EU, a figure Brazilian producers hope to grow in the coming years. Finland' s finance minister said in a statement late last week that he would raise the possibility of banning Brazilian beef at a meeting with his EU

Figure 4 明文