

Example of Text Analysis

```
In[*]:= webpage = Import["https://lexfridman.com/john-mearsheimer-transcript"];

In[*]:= WordCloud[DeleteStopwords[webpage]]

Out[*]=
```



This word cloud makes me think that this conversation is not very interesting. There seems to be no real discussion other than an assortment of people and topics

```
In[*]:= contents = TextContents[webpage, VerifyInterpretation → True];
Loading Initialization Data...
```

Loading Initialization Data...

```
In[•]:= counts = ReverseSort@CountsBy[contents, Type &]
```

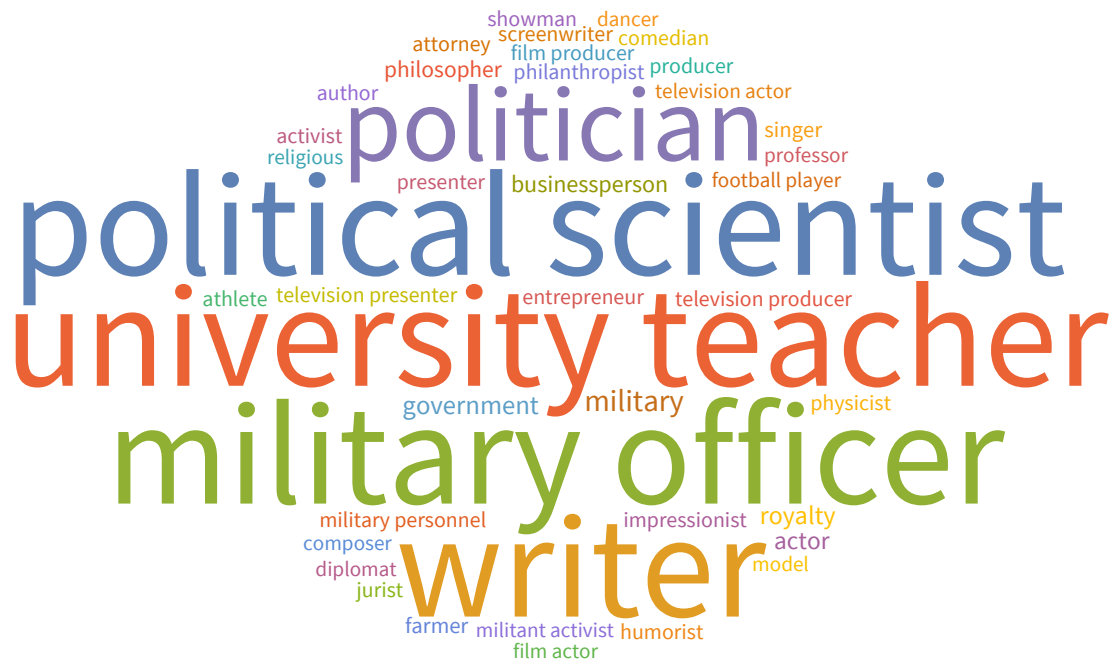
Out[]:=

```
Dataset[Association[Country → 805, GivenName → 455, Person → 363, GovernmentAgency → 192,
Nationality → 191, Date → 140, Year → 93, OrdinalNumber → 73, MilitaryConflict → 71,
Time → 70, Occupation → 66, SportEvent → 63, Religion → 62, Quantity → 61,
HistoricalCountry → 49, City → 45, EthnicGroup → 38, PhysicalConstant → 37,
GeographicRegion → 34, Language → 34, Continent → 33, Unit → 31, Island → 30,
NonperiodicTiling → 30, Surname → 27, HistoricalEvent → 20, Organization → 18,
Season → 17, Color → 17, WaterBodyType → 11, Ocean → 9, TopologicalSpaceType → 9,
TropicalStorm → 8, AdministrativeDivision → 8, Species → 7, MusicAct → 6, University → 4,
SportObject → 3, Building → 2, FoodManufacturer → 2, ProgrammingLanguage → 2,
MusicAlbum → 1, USState → 1, AstronomicalObjectType → 1, Museum → 1, Park → 1,
River → 1, BoardGame → 1, Movie → 1, Food → 1, AstronomicalObject → 1,
HistoricalSite → 1, Castle → 1, Book → 1, Financial → 1, Company → 1],
TypeSystem`Assoc[TypeSystem`Atom[String], TypeSystem`Atom[Integer],
TypeSystem`AnyLength], Association[]]
```

```
In[ ]:= persons = Normal[Select[contents, Type === "Person" &][All, "Interpretation"]];
```

```
In[ ]:= WordCloud[Counts[Flatten@EntityValue[persons, EntityProperty["Person", "Occupation"]]],
ImageSize → Large]
```

Out[]:=



```
In[ ]:= WordCloud[Counts[persons], ImageSize → 500]
```

Out[•]=



```
In[•]:= Show[WordCloud[counts]]
```

Out[]=



```
In[8]:= countries = Normal[Select[contents, Type === "Country" &] [[All, "Interpretation"]]
```

Out[]=

{ Israel , West Bank , Russia , Ukraine , China , Russia , Ukraine , Israel ,
West Bank , China , Russia , Ukraine , Israel , West Bank , United States ,

China , China , China , France , United States , United States , United States ,
 United States , China , United States , United States , United States , China ,
 United States , Germany , United States , Germany , France , Germany , China ,
 Germany , Germany , Germany , Germany , Germany , Russia , Germany ,
 Germany , Poland , France , France , France , France , Poland , Finland ,
 Ukraine , Ukraine , Germany , Ukraine , Ukraine , Russia , Ukraine , Russia ,
 Russia , Russia , Russia , Russia , Germany , Germany , Poland , Poland ,
 Germany , Russia , Ukraine , Ukraine , Russia , Ukraine , Russia , Ukraine ,
 Ukraine , Russia , Ukraine , Ukraine , Ukraine , Ukraine , Germany , Poland ,
 Germany , Poland , Poland , Poland , Ukraine , Germany , Ukraine , Ukraine ,
 Ukraine , Turkey , Israel , Ukraine , Ukraine , Ukraine , Russia , United States ,
 Russia , United States , Cuba , Russia , Ukraine , Georgia , Georgia , Russia ,
 United States , Ukraine , Ukraine , Germany , France , Ukraine , United States ,
 Russia , Ukraine , Russia , Ukraine , Ukraine , Ukraine , Russia , Ukraine ,
 Ukraine , Ukraine , Ukraine , United States , Russia , Russia , Russia , China ,
 Russia , Russia , United States , United States , United States , United States ,
 Russia , United States , China , Russia , Germany , Ukraine , United States ,
 United States , United States , Russia , China , United States , United States ,
 China , China , China , Russia , United States , Russia , United States , Ukraine ,
 United States , Ukraine , Russia , Ukraine , Ukraine , Ukraine , Russia , Russia ,
 Ukraine , Russia , Russia , Ukraine , United States , United States , United States ,
 United States , Turkey , United States , United Kingdom , United States , United States ,
 Russia , Ukraine , United States , China , Russia , Ukraine , Ukraine , Ukraine ,
 Ukraine , Ukraine , Russia , Russia , Ukraine , Russia , Ukraine , Russia ,
 Ukraine , Russia , Ukraine , Ukraine , Russia , Ukraine , Ukraine , United States ,
 Ukraine , Ukraine , Russia , Russia , Russia , Ukraine , Russia , Ukraine ,
 Ukraine , Russia , Ukraine , Russia , Russia , Ukraine , Germany , France ,
 Russia , France , Ukraine , France , Germany , Ukraine , Ukraine , Russia ,

United States , Ukraine , Ukraine , Russia , Ukraine , Israel , Russia , Ukraine ,
 Russia , Russia , Russia , Ukraine , Ukraine , China , China , United States ,
 China , Ukraine , United States , Ukraine , China , Ukraine , Russia , Ukraine ,
 Ukraine , Russia , Ukraine , Ukraine , Ukraine , Ukraine , Ukraine , Ukraine ,
 Ukraine , United States , Russia , Ukraine , Russia , Russia , Russia , Ukraine ,
 United States , China , Russia , Israel , United States , Russia , Russia ,
 Ukraine , Ukraine , Ukraine , Russia , Russia , Russia , Ukraine , Russia ,
 Russia , Ukraine , Russia , United States , Russia , Russia , Russia , Russia ,
 Poland , Cuba , Israel , Israel , Israel , West Bank , West Bank , West Bank ,
 Israel , Saudi Arabia , United States , West Bank , Saudi Arabia , West Bank ,
 Israel , Israel , Israel , Israel , West Bank , Israel , Israel , Israel , West Bank ,
 West Bank , United States , United States , Israel , Israel , Israel , Israel ,
 Israel , West Bank , Israel , Israel , Israel , Israel , West Bank , Israel , Israel ,
 West Bank , Israel , Israel , West Bank , Israel , Israel , West Bank , Israel ,
 Israel , West Bank , Israel , West Bank , West Bank , Panama , West Bank ,
 Israel , West Bank , West Bank , West Bank , Israel , West Bank , Israel ,
 Israel , Israel , Israel , Israel , Israel , United States , Israel , Israel , Israel ,
 West Bank , West Bank , Israel , West Bank , West Bank , Israel , Israel ,
 West Bank , West Bank , Israel , Jordan , Egypt , United States , West Bank ,
 United States , Israel , Israel , Israel , Israel , Israel , Israel , Israel , Israel ,
 Israel , Israel , Israel , Israel , Israel , Israel , West Bank , Israel , West Bank ,
 Jordan , Saudi Arabia , Israel , Israel , United States , United States , Israel ,
 United States , Israel , United States , United States , Israel , Israel , United States ,
 Israel , Israel , United States , Israel , United States , United States , Israel ,
 United States , United States , United States , United States , Israel , United States ,
 United States , Israel , United States , Israel , Israel , United States , Israel ,
 Israel , Israel , Israel , Israel , United States , Israel , Israel , Israel , Israel ,
 Israel , United States , Israel , Israel , United States , United States , United States ,

Israel , Israel , Israel , Israel , United States , Israel , United States , Israel ,
 United States , Israel , Israel , West Bank , Israel , Israel , Israel , Israel , Israel ,
 West Bank , Israel , Israel , West Bank , Israel , West Bank , United States ,
 United States , Israel , Israel , Israel , United States , United States , United States ,
 Israel , United States , Israel , Israel , United States , Israel , United States ,
 Israel , Bosnia and Herzegovina , Croatia , Serbia , Bosnia and Herzegovina ,
 Bosnia and Herzegovina , Croatia , Serbia , Germany , Germany , Japan , China ,
 Japan , South Korea , West Bank , Israel , Israel , Rwanda , West Bank ,
 Israel , Israel , Gaza Strip , Germany , Turkey , Armenia , Poland , Germany ,
 Germany , Israel , Israel , West Bank , Israel , West Bank , Israel , West Bank ,
 Israel , Israel , Israel , West Bank , United States , United States , United States ,
 Israel , Israel , United States , Israel , United States , Israel , United States ,
 Israel , Israel , United States , United States , Israel , Israel , Israel , Israel ,
 Israel , West Bank , West Bank , Israel , West Bank , Israel , Israel , West Bank ,
 Israel , West Bank , Saudi Arabia , West Bank , Israel , Israel , West Bank ,
 Israel , Israel , United States , United States , Ukraine , United States , Israel ,
 United States , China , Ukraine , Ukraine , Ukraine , Ukraine , Ukraine , Israel ,
 Israel , Israel , United States , United States , Israel , Israel , United States , Israel ,
 Israel , Israel , Ukraine , United States , China , China , United States , China ,
 China , China , Taiwan , China , Taiwan , Taiwan , China , China , Taiwan ,
 Taiwan , China , Taiwan , Taiwan , Taiwan , China , Japan , South Korea ,
 Philippines , Australia , Taiwan , China , China , United States , China , China ,
 Taiwan , China , China , Taiwan , Taiwan , Japan , United States , China ,
 China , Taiwan , China , Taiwan , China , China , United States , China ,
 Japan , South Korea , Philippines , Australia , Taiwan , China , China , Taiwan ,
 Taiwan , China , Taiwan , China , United States , China , China , China ,
 Taiwan , China , Taiwan , China , China , United States , China , China ,
 United States , United States , United States , United States , China , China ,

United States , United States , China , United States , United States , China ,
 United States , China , United States , Taiwan , United States , China , Taiwan ,
 United States , China , Taiwan , Australia , Israel , Israel , Saudi Arabia , Iran ,
 Iraq , Israel , Iran , Iran , Russia , China , United States , Israel , China ,
 United States , China , China , United States , United States , United States ,
 United States , United States , China , China , China , China , China ,
 United States , United States , Russia , United States , Ukraine , United States ,
 China , United States , United States , United States , China , United States ,
 United States , United States , China , United States , United States , United States ,
 China , Taiwan , China , China , China , China , Taiwan , United States ,
 United States , India , Kenya , Singapore , Australia , United States , Philippines ,
 Cuba , Puerto Rico , United States , United Kingdom , United States , United Kingdom ,
 Vietnam , Kenya , West Bank , West Bank , West Bank , West Bank , India ,
 Pakistan , Kenya , Singapore , United States , United Kingdom , United States ,
 Germany , France , Canada , Canada , United States , Spain , Brazil ,
 Portugal , United States , United States , United Kingdom , United States , Iran ,
 China , Russia , Russia , China , United States , United States , United States ,
 Germany , Ireland , United States , United States , United States , United States ,
 United States , United States , United States , United States , United States ,
 Germany , Ireland , Germany , United States , Italy , Germany , Ireland , Italy ,
 United States , United States , United States , Ireland , Ireland , United States ,
 United States , United States , United States , United States , United States , Guam ,
 United States , United States , Israel , West Bank , Russia , Ukraine , China }

```
In[ ]:= WordCloud[countries, ImageSize -> 500]
```

Out[]:=



```
In[ ]:= WordCloud[Normal[Select[contents, Type === "MilitaryConflict" &] [All, "Interpretation"]],
  ImageSize -> Large]
```


Out[8]=



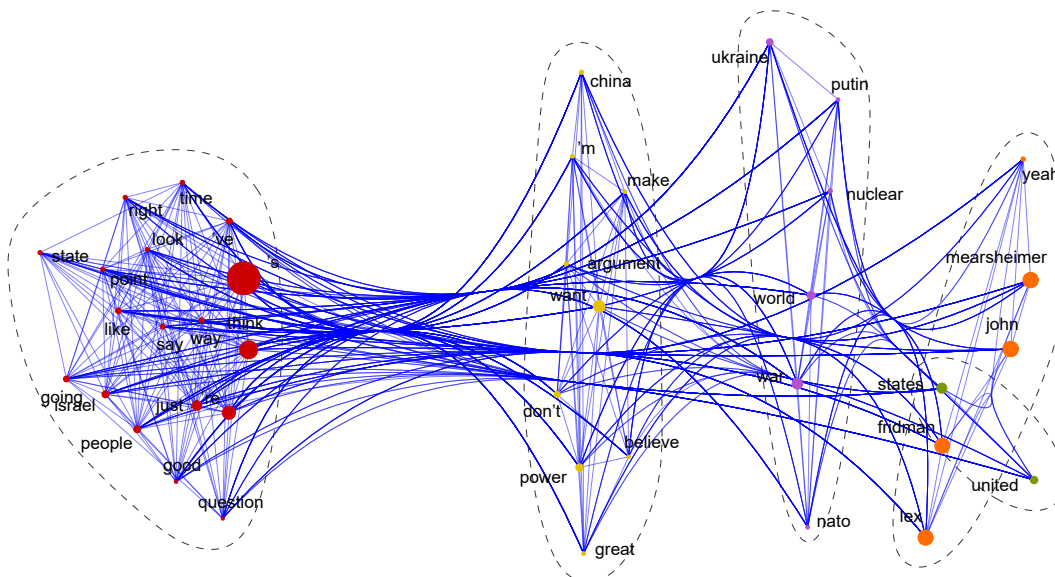
KeywordGraph

```
In[ ]:= Options[KeywordsGraph] = {DirectedEdges → False, EdgeWeight → Automatic, "LowerCase" → True,
  "StopWords" → True, VertexLabels → Automatic, VertexWeight → Automatic};
```

```
KeywordsGraph[text_String, number_Integer?Positive, blist_List : {},
  rlist_List : {}, opts : OptionsPattern[{KeywordsGraph, Graph}]] :=
Module[{keycounts, keywords, edges, edgeCount, data =
  Replace[DeleteCases[TextWords[If[TrueQ[OptionValue["StopWords"]], DeleteStopwords,
    Identity][If[TrueQ[OptionValue["LowerCase"]], ToLowerCase, Identity][text]]],
    Alternatives@@blist], rlist, {1}]], keycounts = Counts[data];
Quiet[Check[keywords = TakeLargest[keycounts, number],
  Return[Failure["KeywordCount", <|"MessageTemplate" →
    "Number of specified keywords `1` exceeds the actual number of keywords `2`.",
    "MessageParameters" → {number, Length[keycounts]}>], Module]]];
edges = Partition[Cases[data, Alternatives@@Keys[keywords]], 2, 1];
edgeCount = If[TrueQ[Replace[OptionValue[DirectedEdges], Automatic → False]],
  KeySelect[Counts[DirectedEdge@@@edges], #[[1]] ≠ #[[2]] &],
  KeySelect[Counts[Sort /@ UndirectedEdge@@@edges], #[[1]] ≠ #[[2]] &]];
Graph[Keys[keywords], Keys[edgeCount], FilterRules[Flatten[Join[{opts,
  VertexWeight → Replace[OptionValue[VertexWeight], Automatic → Values[keywords]],
  EdgeWeight → Replace[OptionValue[EdgeWeight], Automatic → Values[edgeCount]]],
  Options[KeywordsGraph]]], Options[Graph]]]
```

```
In[ ]:= CommunityGraphPlot[KeywordsGraph[DeleteStopwords[webpage], 40,
  VertexSize → "VertexWeight", EdgeStyle → Directive[Blue, Opacity[0.5]]],
  CommunityBoundaryStyle → Directive[Black, Dashed, Opacity[0.8]],
  ImageSize → Large, GraphLayout → "RadialEmbedding"]
```

```
Out[ ]:=
```



KeywordPlot

```

In[ ]:= KeywordPlot // ClearAll;
Options[KeywordPlot] =
  Options[SmoothHistogram] ~ Join ~ {"PlotFunction" → Automatic, "TopN" → All};
KeywordPlot::nokwd = "Keyword \"`1`\" not found in text.";

(*Operatorforms*)
KeywordPlot[keyword_String, opts : OptionsPattern[]] := KeywordPlot[{keyword}, opts];
KeywordPlot[keywords_List, opts : OptionsPattern[]] :=
  Function[text, KeywordPlot[text, keywords, opts]];

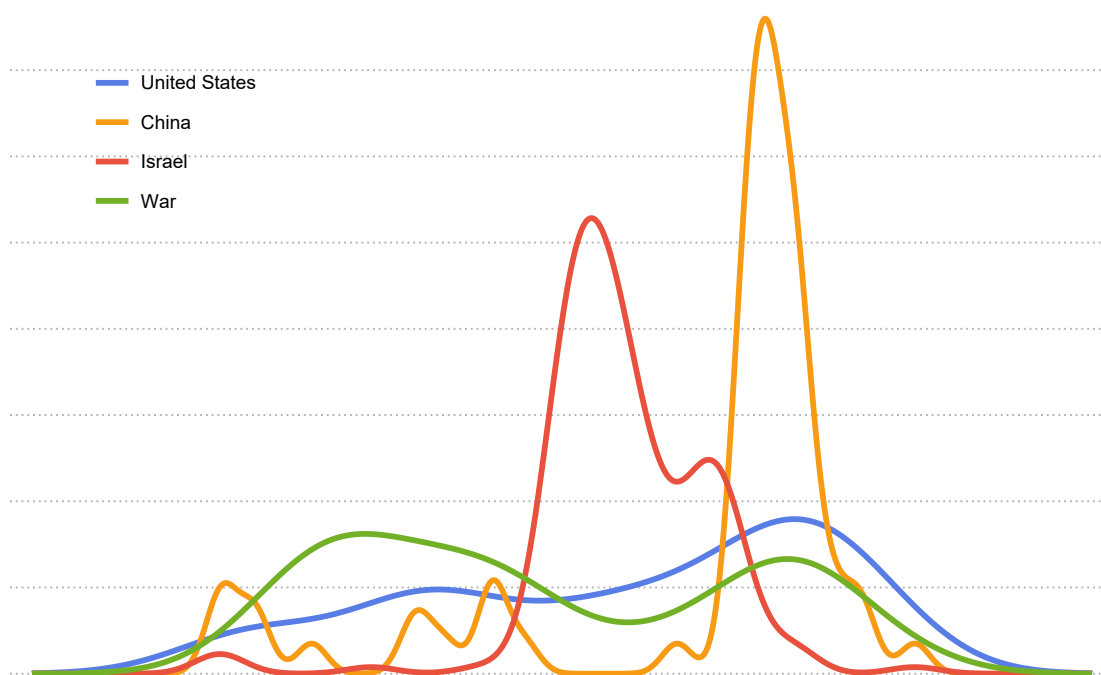
(*Mainform*)
KeywordPlot[text_String, keyword_String, opts : OptionsPattern[]] :=
  KeywordPlot[text, {keyword}, opts];
KeywordPlot[text_String, keywords_List, opts : OptionsPattern[]] :=
  Module[{pltFun, topN, txt, kws, pos, badpos},
    pltFun = OptionValue["PlotFunction"] /. Automatic → SmoothHistogram;
    topN = OptionValue["TopN"];
    txt = RemoveDiacritics@ToLowerCase@text;
    kws = RemoveDiacritics@ToLowerCase@keywords;
    pos = StringPosition[txt, #] [[All, 1]] & /@ kws;
    badpos = Position[pos, {}];
    If[badpos != {}, ResourceFunction["ResourceSystemMessage"][KeywordPlot::nokwd, #] & /@
      Extract[kws, badpos];
    If[Flatten[pos] == {}, Return@$Failed, (*nokeywordstoplot*) kws = Delete[kws, badpos];
      pos = Delete[pos, badpos];];
    If[IntegerQ@topN, ord = OrderingBy[pos, -Length[#] &];
      pos = Take[pos[[ord]], UpTo@topN];
      kws = Take[kws[[ord]], UpTo@topN];];
    pltFun @@ {pos, Sequence @@ FilterRules[{opts}, Options[pltFun]],
      PlotLegends → kws, AspectRatio → 1 / GoldenRatio,
      PlotTheme → "Minimal", ImageSize → Automatic, Frame → None}]

In[ ]:= keywords = {"United States", "China", "Israel", "War"};

KeywordPlot[keywords, ImageSize → Large,
  PlotLegends → Placed[keywords, {{.15, .8}}], PlotTheme → "Business"] @webpage

```

Out[]=



In[]:= WordCloud[DeleteStopwords[webpage], ImageSize → Large]

Out[•]=



```
keywords = {"United States", "China", "Israel", "War"};
```

```
KeywordPlot[keywords, ImageSize -> Large,
```

PlotLegends → Placed[keywords, {{.15, .8}}], PlotTheme → "Business"] @webpage

Nonfunctioning Resource Functions

```
In[•]:= ResourceFunction["ReadabilityScore"][webpage]
```

Out[•]=

7.08353

```
In[ ]:= NestGraph[{ResourceFunction["WordDefinitionLookup"], Synonyms}/*Through/*Flatten,
"China", 3, VertexLabels->"Name", ImageSize->Large]
```

Initializing WordData indices

Initializing WordData indices

Initializing WordData indices

Initializing WordData indices

Initializing WordData indices

Initializing WordData indices

`In[]:= ResourceFunction["SynonymGraph"] ["China", 3, ImageSize -> Full]`

`Out[]:=`

