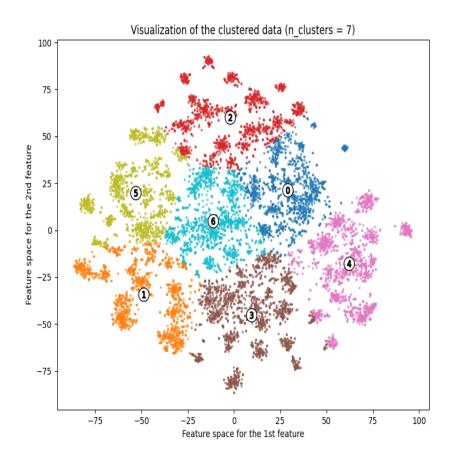
Alternative with 7 clusters:



Cluster 0:

social 2310 community 2070 model 1876 change 1589 health 1477 public 1355 understanding 1250 policy 1138 pandemic 1123 risk 1106 information 1089 behavior 1075 human 1035 response 1033 provide 992 work 969 disease 916 individual 915

```
analysis 903
      people 876
Cluster 1:
      quantum 3411
      theory 1780
      material 1705
      model 1657
      physic 1517
      field 1388
      energy 1375
      problem 1293
      pi 1203
      property 1193
      understanding 1190
      structure 1151
      group 1136
      application 1114
      particle 1047
      flow 1039
      wave 1034
      method 1033
      equation 940
      work 887
Cluster 2:
      change 2129
      water 2092
      plant 2009
      model 1941
      specie 1812
      protein 1791
      ocean 1748
      understanding 1687
      community 1608
      climate 1508
      process 1462
      provide 1312
      cell 1195
      carbon 1161
      undergraduate 1136
      gene 1134
      soil 1085
      used 1074
      training 1009
      result 995
Cluster 3:
      learning 2992
```

model 2890 network 2704 application 2078 algorithm 1892 method 1685 design 1576 problem 1542 computing 1399 technology 1395 machine 1346 information 1309 technique 1306 approach 1229 tool 1219 software 1188 analysis 1160 human 1145 language 1143 user 1128 Cluster 4: stem 5719 learning 3794 education 3188 teacher 2695 engineering 2559 community 2249 school 1992 undergraduate 1958 experience 1947 university 1933 faculty 1847 career 1739 practice 1689 professional 1575 technology 1562 field 1555 college 1455 provide 1432 conference 1408 group 1398 Cluster 5: material 3819 process 1541 chemical 1492 property 1465 structure 1382

understanding 1315 model 1299 energy 1237 used 1183 chemistry 1169 surface 1160 high 1086 university 1086 polymer 1081 undergraduate 1053 design 999 provide 963 method 899 application 888 reaction 871 Cluster 6: cell 2448 technology 2106 device 1300 proposed 1286 phase 1218 material 1190 potential 1155 small 1136 process 1107 patient 1106 manufacturing 1098 model 1092 innovation 1065 design 1039 business 957 method 938 provide 914 approach 904 novel 897 tissue 878