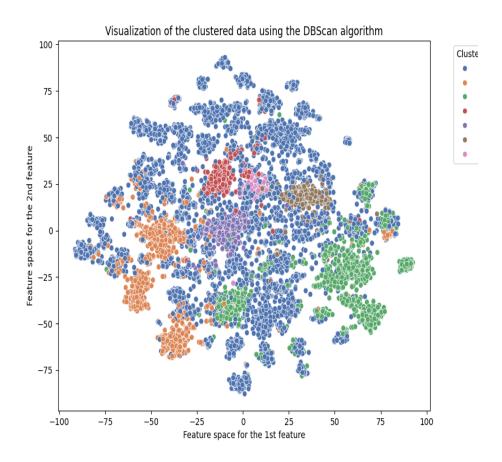
## Clusters created by the DBScan algorithm



## Cluster -1:

community 4967 understanding 4873 process 4527 change 4393 technology 4388 provide 4291 network 3922 work 3912 method 3813 approach 3562 result 3530 water 3430 design 3378 field 3373 application 3362 including 3286 analysis 3269 activity 3256

```
undergraduate 3196
      researcher 3143
Cluster 0:
      material 5339
      quantum 3518
      theory 1977
      property 1956
      structure 1613
      application 1455
      problem 1337
      group 1235
      field 1204
      pi 1187
      understanding 1184
      method 1133
      fundamental 1130
      physic 1124
      energy 1121
      design 1006
      state 1002
      device 976
      technology 970
      graduate 944
Cluster 1:
      stem 5785
      learning 5179
      education 3193
      teacher 2702
      engineering 2325
      community 2191
      undergraduate 1901
      school 1886
      experience 1784
      university 1741
      faculty 1732
      practice 1648
      career 1540
      professional 1465
      college 1455
      course 1447
      knowledge 1425
      provide 1398
      field 1392
      technology 1362
Cluster 2:
      cell 2970
```

```
protein 876
      function 441
      cellular 430
      tissue 430
      understanding 381
      process 359
      biology 348
      mechanism 344
      provide 336
      gene 331
      human 317
      biological 302
      molecular 301
      undergraduate 283
      structure 278
      interaction 269
      stem 267
      approach 266
      method 265
Cluster 3:
      phase 902
      small 800
      business 766
      innovation 762
      sbir 700
      technology 607
      patient 486
      proposed 477
      potential 449
      broader 423
      cost 342
      device 301
      treatment 238
      solution 231
      advance 224
      novel 218
      application 210
      process 209
      enable 195
      health 184
Cluster 4:
      social 1691
      health 905
      pandemic 799
      public 728
      policy 543
```

risk 494

behavior 492

response 491

community 459

information 438

people 413

individual 398

survey 382

change 347

time 346

state 308

understanding 306

economic 288

crisis 285

effect 282

## Cluster 5:

virus 671

disease 306

transmission 256

spread 249

infection 237

coronavirus 226

viral 224

pandemic 175

rapid 175

public 157

provide 149

health 146

outbreak 144

human 141

understanding 132

testing 130

result 125

novel 116

approach 111

surface 110