Technical Report: Deep Learning Methods for Thyroid Imaging Segmentation: A Systematic Review

1. Search process record

| Database | Number of searches | Number of repetitions in each database | Number of repetitions in all databases | Total number(after deleting repetitions) |
|---|---|---|---|---|
| ACM | 81 | 1 | 2044 | 80 |
| IEEE | 92 | 3 | | 89 |
| Engineering Village | 551 | 237 | | 314 |
| Google Scholar | 1630 | 783 | | 847 |
| Science Direct | 1200 | 562 | | 638 |
| Springer | 770 | 458 | | 312 |
| Total | 4324 | 2044 | | 2280 |

Excute inclusion/exclusion criteria

| Database | Apply criteria (I1-I2,E3) | Apply criteria in (I3,E1-E2，E4-E5) title,abstract | Apply criteria in (I3,E1-E2, E4-E5)in full article | Apply criteria in (I4)in full article | Snowballing | Final |
|---|---|---|---|---|---|---|
| ACM | 656 | 185 | 170 | 47 | 1 | 48 |
| IEEE | | | | | | |
| Engineering Village | | | | | | |
| Google Scholar | | | | | | |
| Science Direct | | | | | | |
| Springer | | | | | | |
| Total | | | | | | |

2. Search records:

Digital Libraries:

| Database | |
|---|---|
| ACM | https://www.acm.org/publications/digital-library |
| IEEE | ieees://ieeexplore.ieee.org/Xplore/home.jsp |
| Engineering Village | https://www.engineeringvillage.com/home.url |
| Google Scholar | https://scholar.google.com |
| Science Direct | scien://www.sciencedirect.com |
| Springer | https://link.springer.com/ |

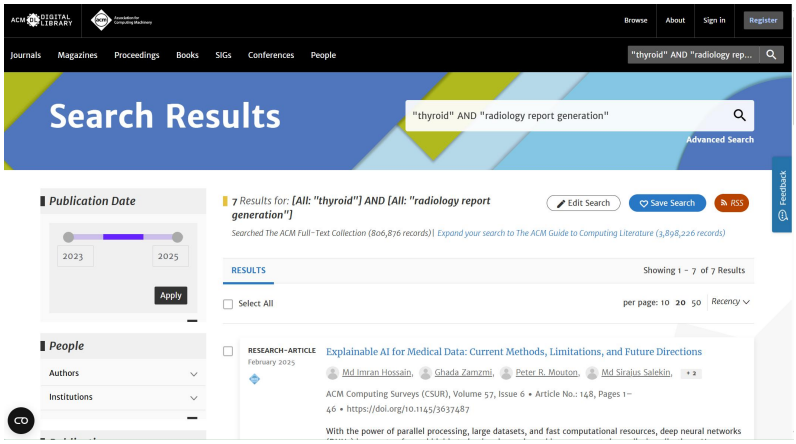
Search terms:

("thyroid" AND "radiology report generation") OR ("thyroid nodule" AND ("deep learning" OR "AI") AND "ultrasound") OR ("TI-RADS" AND ("natural language processing" OR "report")) OR ("multimodal AI" AND "thyroid" AND ("ultrasound" OR

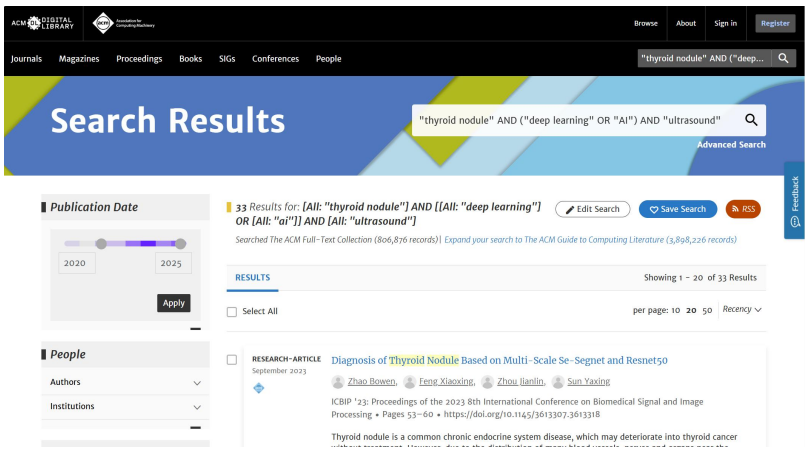
"pathology")) OR ("radiology report generation" AND "deep learning")

## 1) ACM

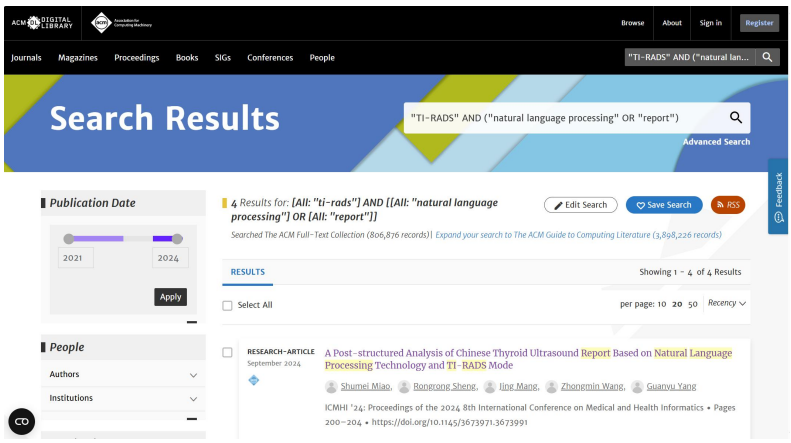
("thyroid" AND "radiology report generation")



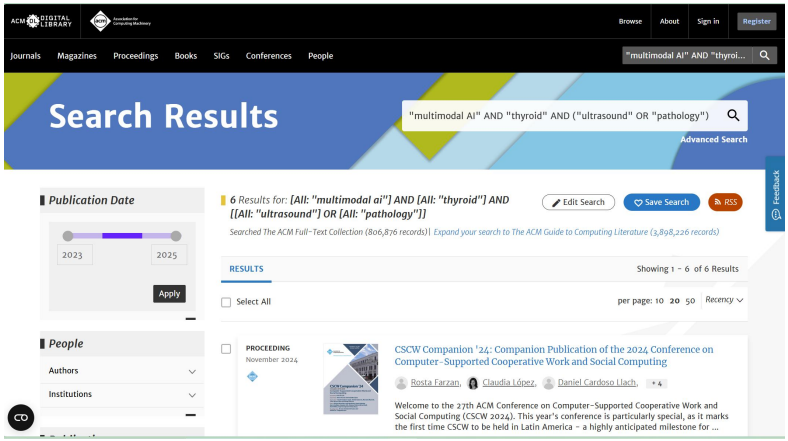

("thyroid nodule" AND ("deep learning" OR "AI") AND "ultrasound")



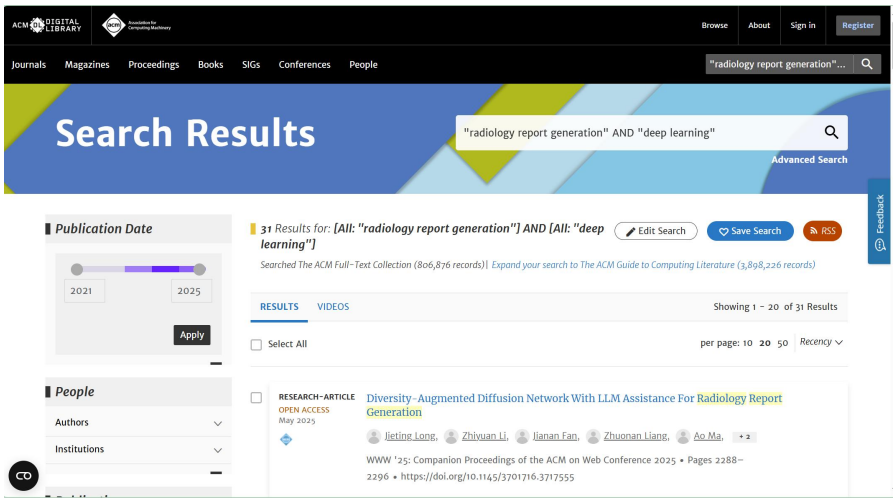

("TI-RADS" AND ("natural language processing" OR "report"))



("multimodal AI" AND "thyroid" AND ("ultrasound" OR "pathology"))

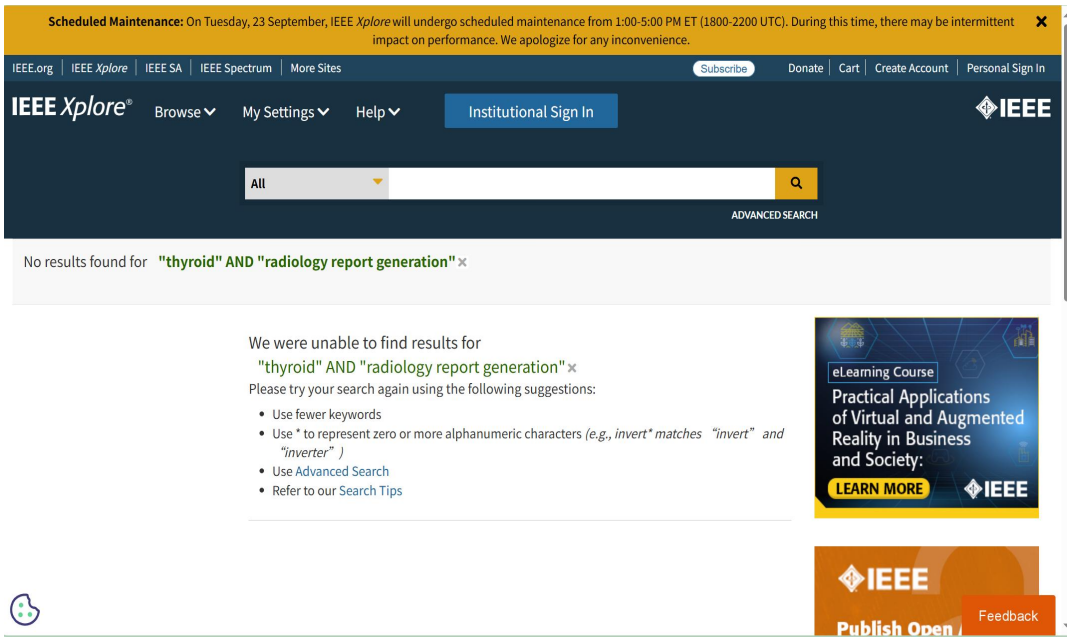



("radiology report generation" AND "deep learning")

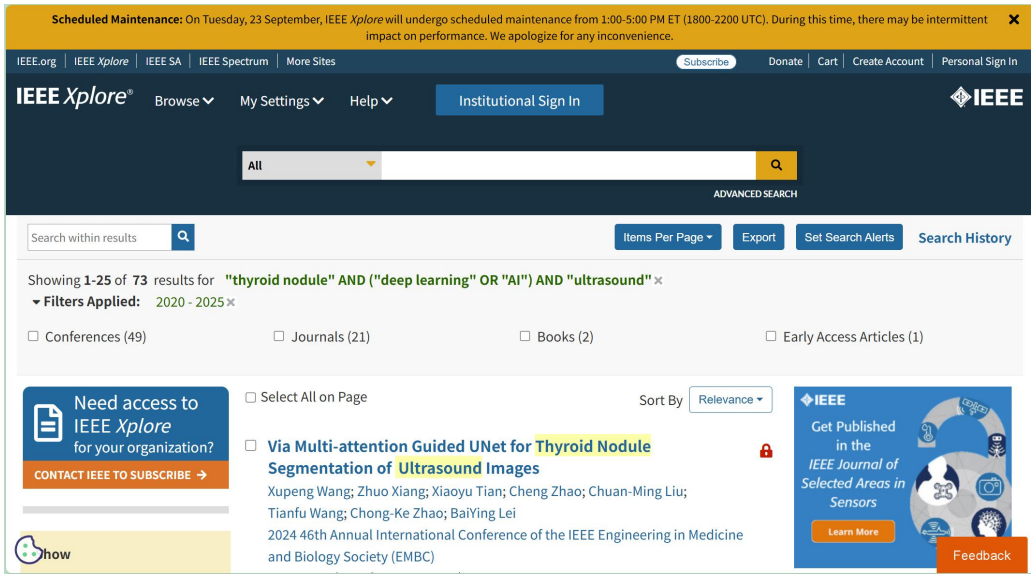



## 2) IEEE

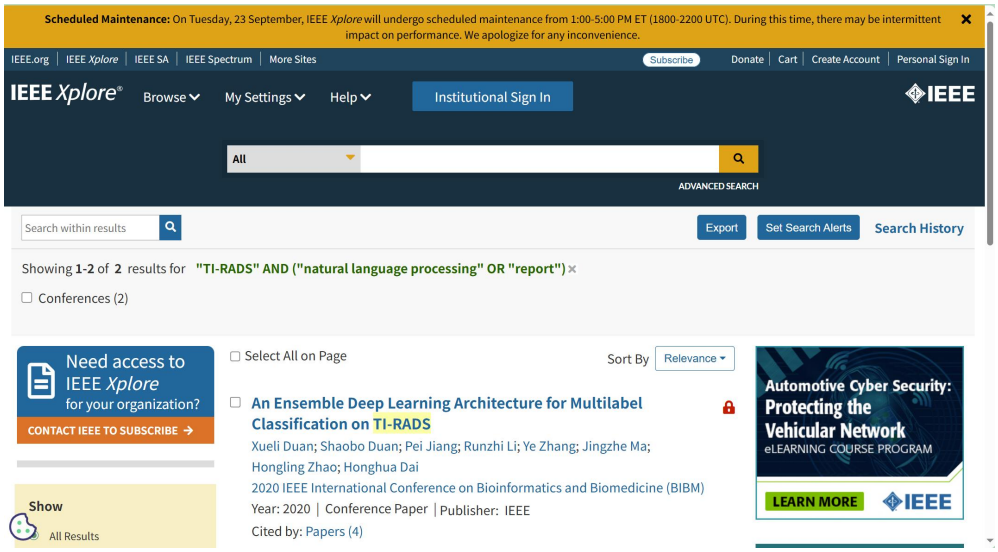
("thyroid" AND "radiology report generation")



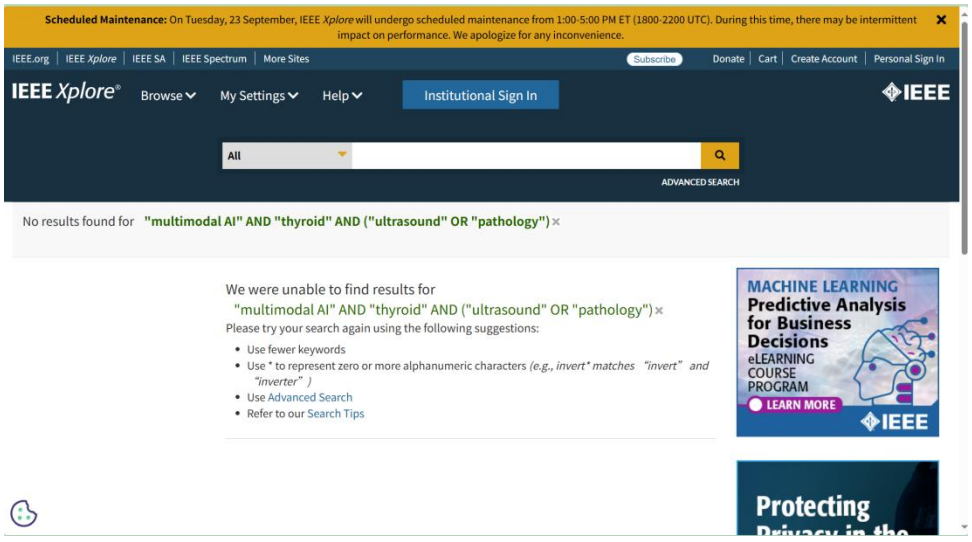
("thyroid nodule" AND ("deep learning" OR "AI") AND "ultrasound")



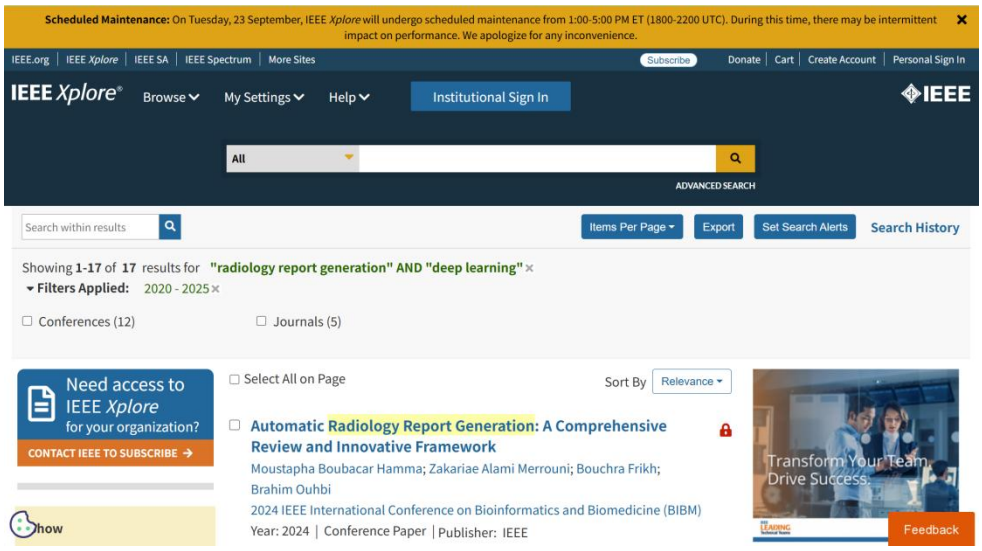

("TI-RADS" AND ("natural language processing" OR "report"))




("multimodal AI" AND "thyroid" AND ("ultrasound" OR "pathology"))

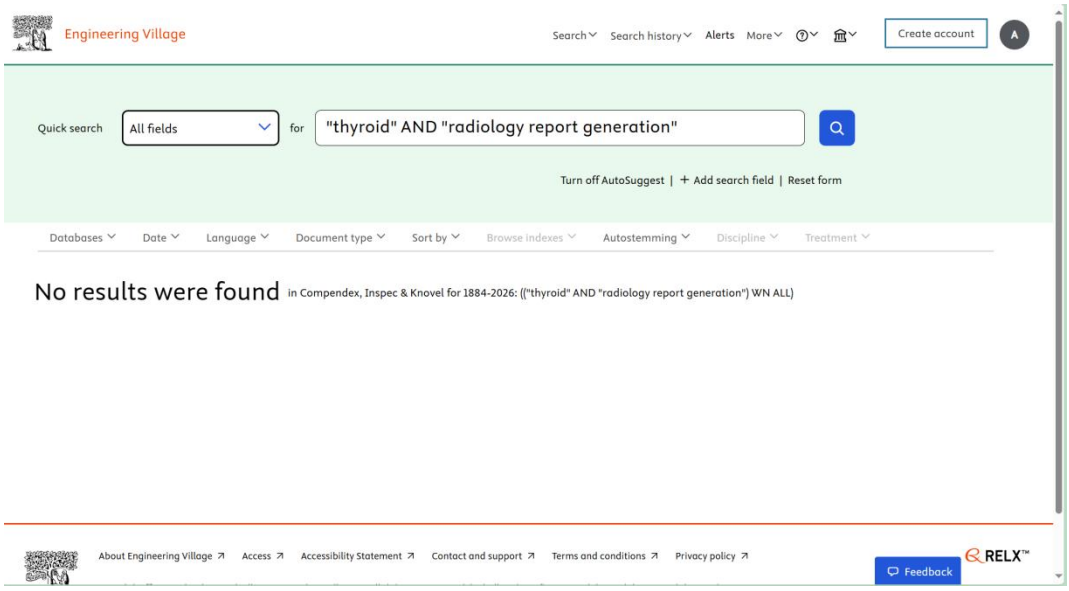


("radiology report generation" AND "deep learning")

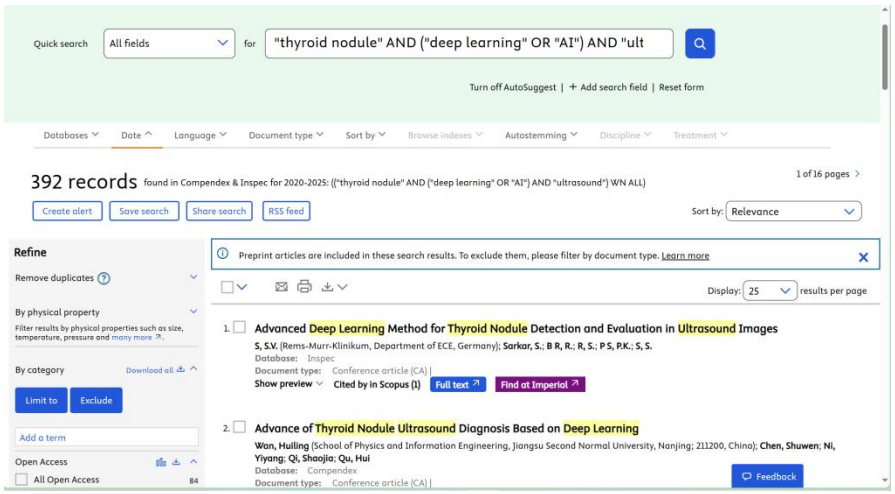



## 3) Engineering Village

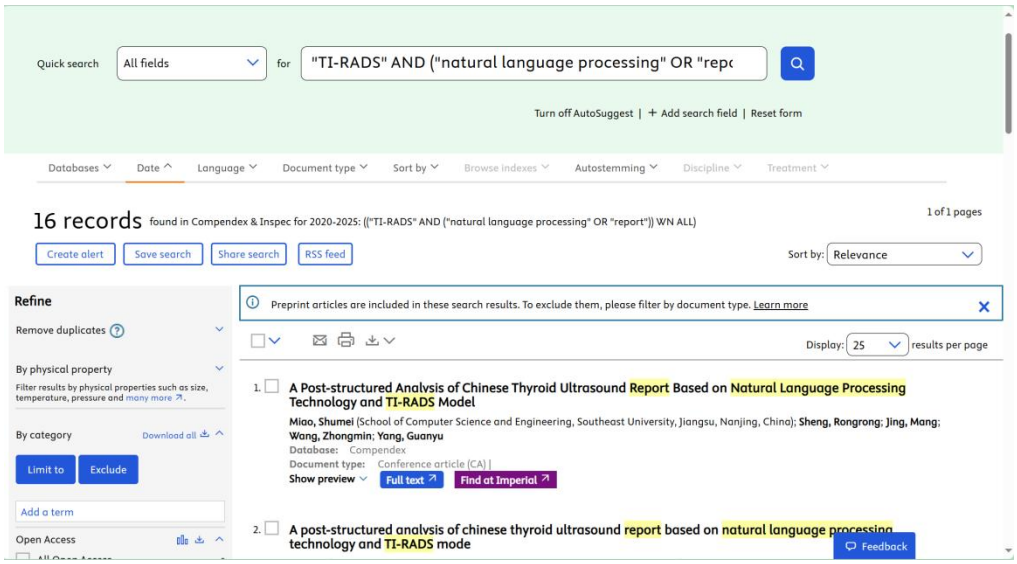
("thyroid" AND "radiology report generation")



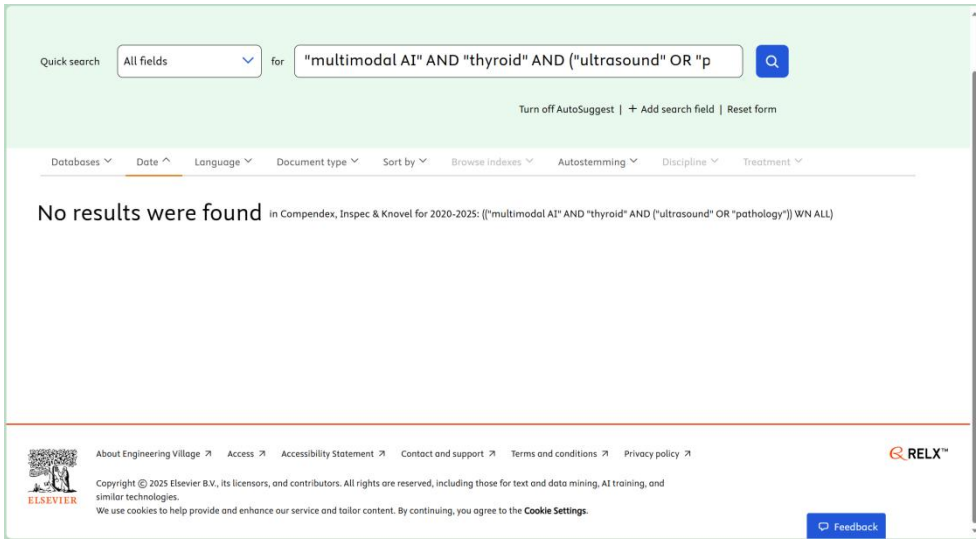

("thyroid nodule" AND ("deep learning" OR "AI") AND "ultrasound")



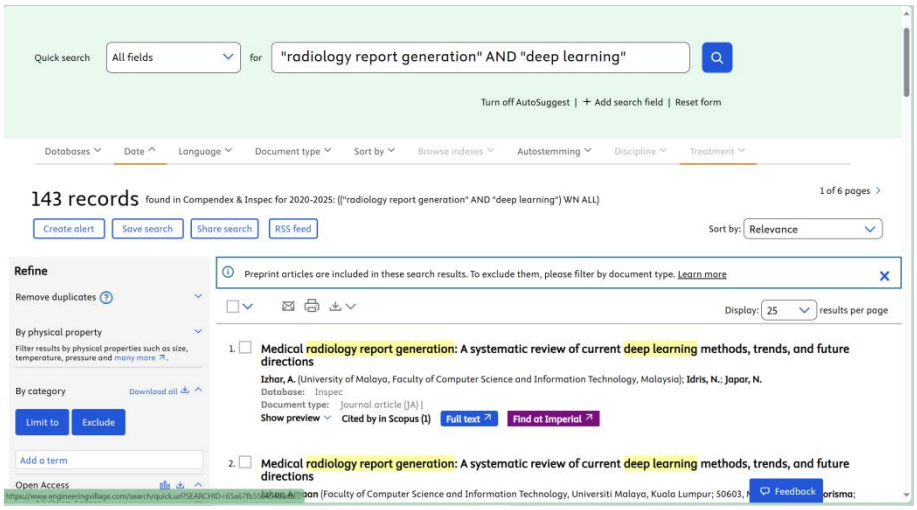
("TI-RADS" AND ("natural language processing" OR "report"))




("multimodal AI" AND "thyroid" AND ("ultrasound" OR "pathology"))

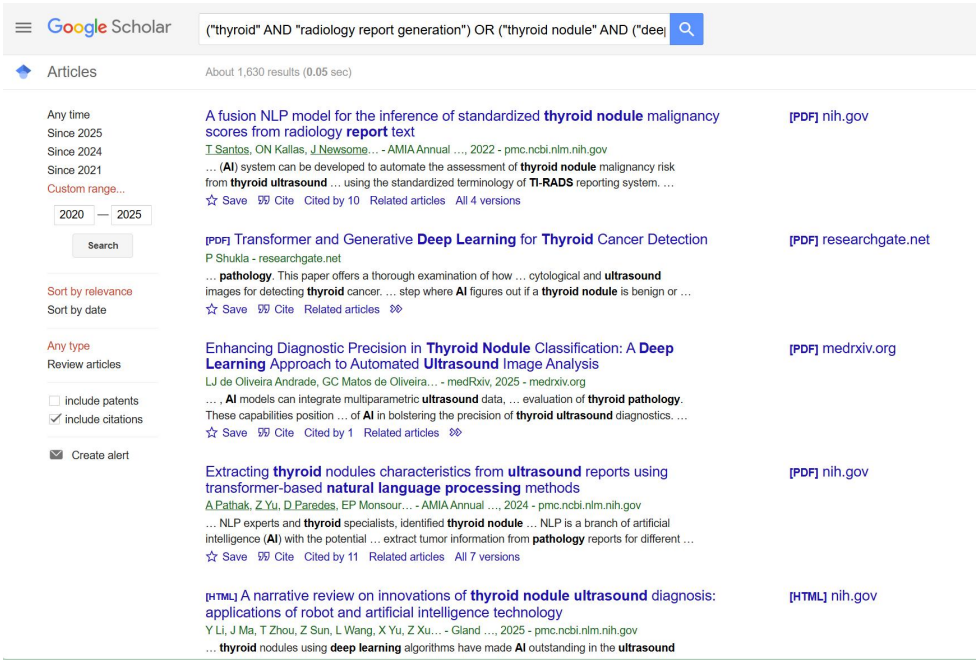



("radiology report generation" AND "deep learning")



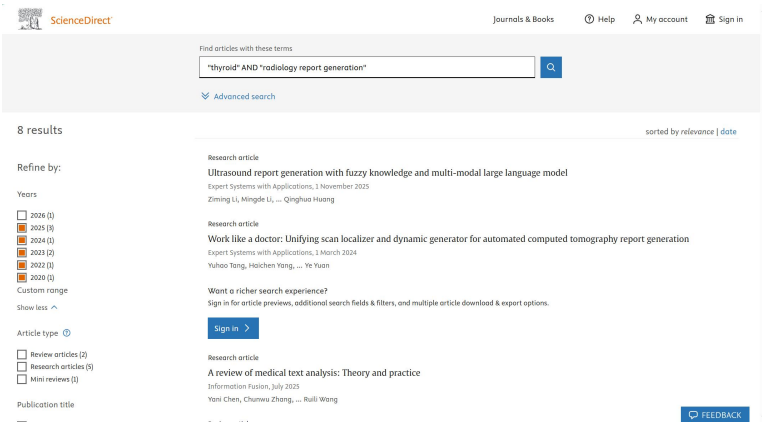
## 4) Google Scholar

("thyroid" AND "radiology report generation") OR ("thyroid nodule" AND ("deep learning" OR "AI") AND "ultrasound") OR ("TI-RADS" AND ("natural language processing" OR "report")) OR ("multimodal AI" AND "thyroid" AND ("ultrasound" OR "pathology")) OR ("radiology report generation" AND "deep learning")

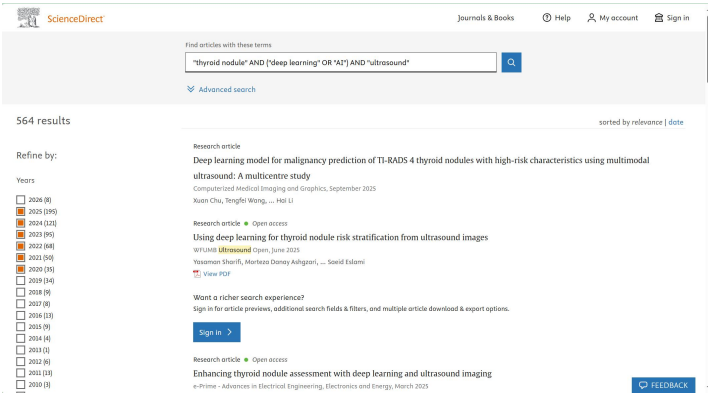



## 5) Science Direct

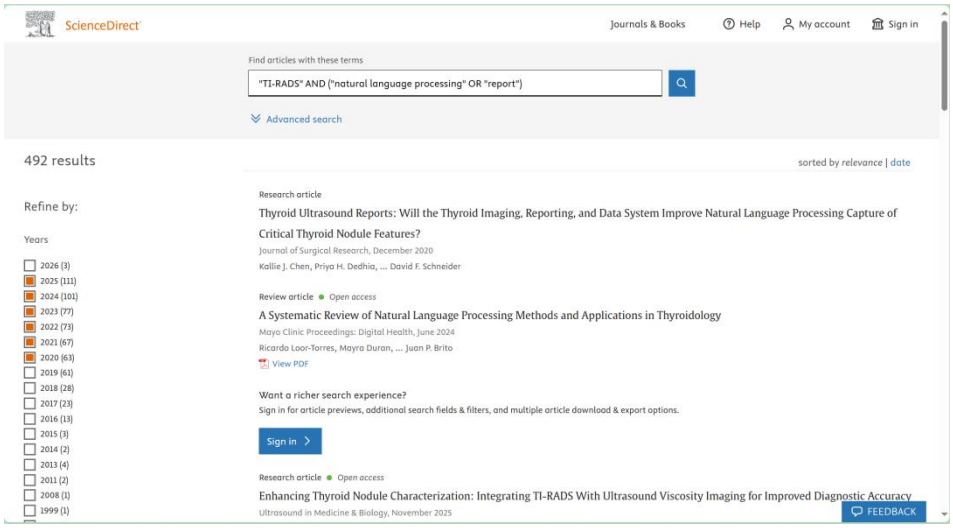
("thyroid" AND "radiology report generation")



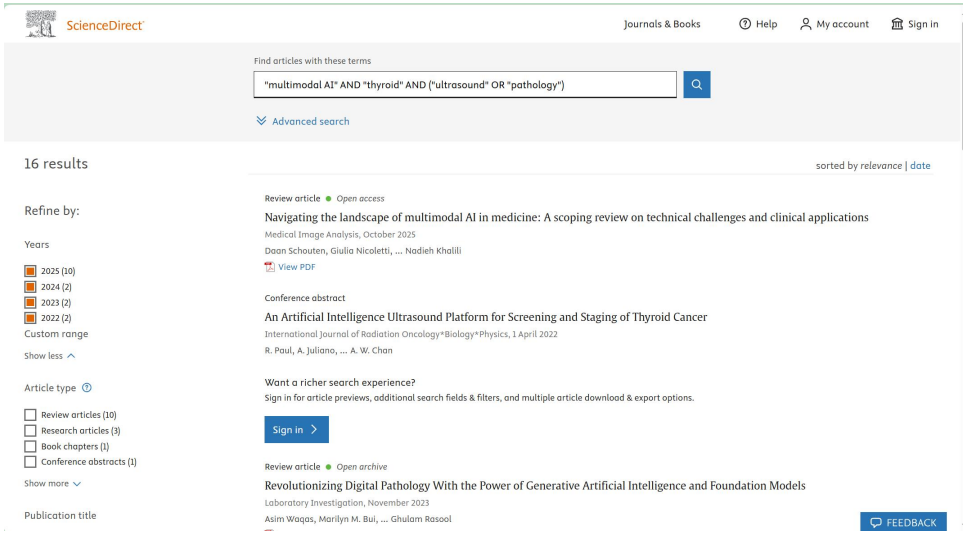

("thyroid nodule" AND ("deep learning" OR "AI") AND "ultrasound")



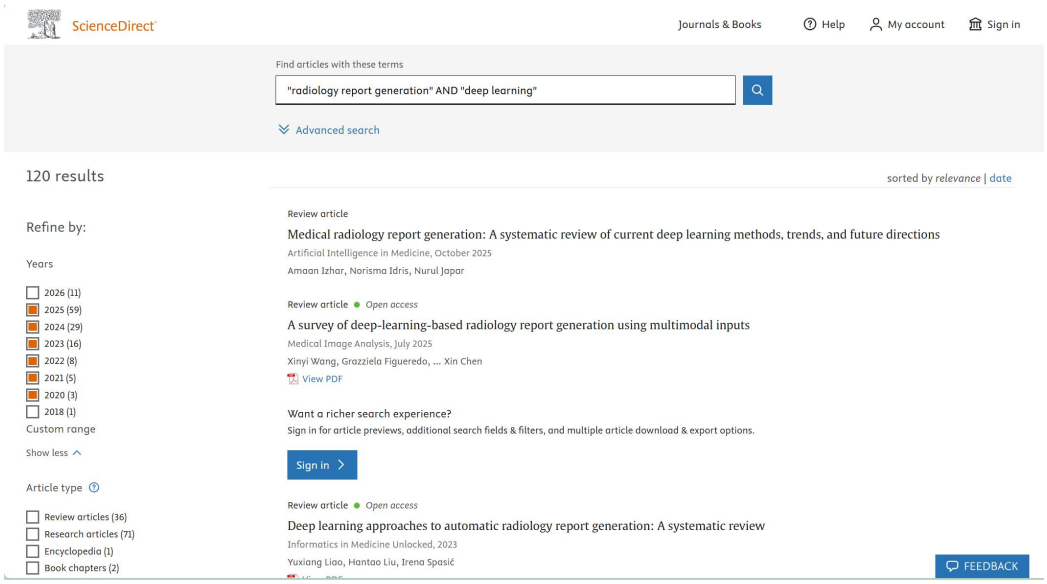
("TI-RADS" AND ("natural language processing" OR "report"))




("multimodal AI" AND "thyroid" AND ("ultrasound" OR "pathology"))

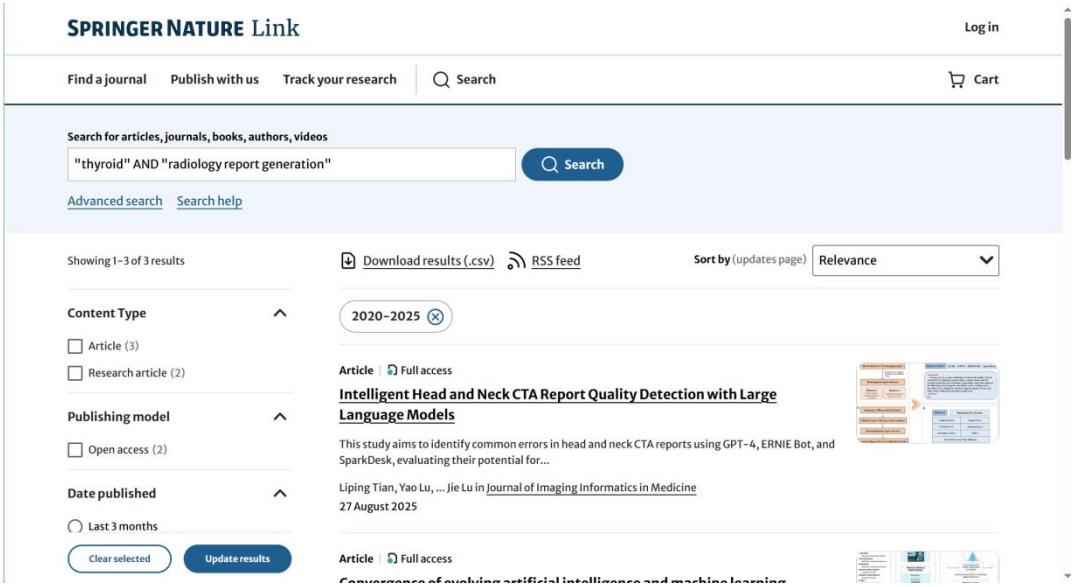



("radiology report generation" AND "deep learning")

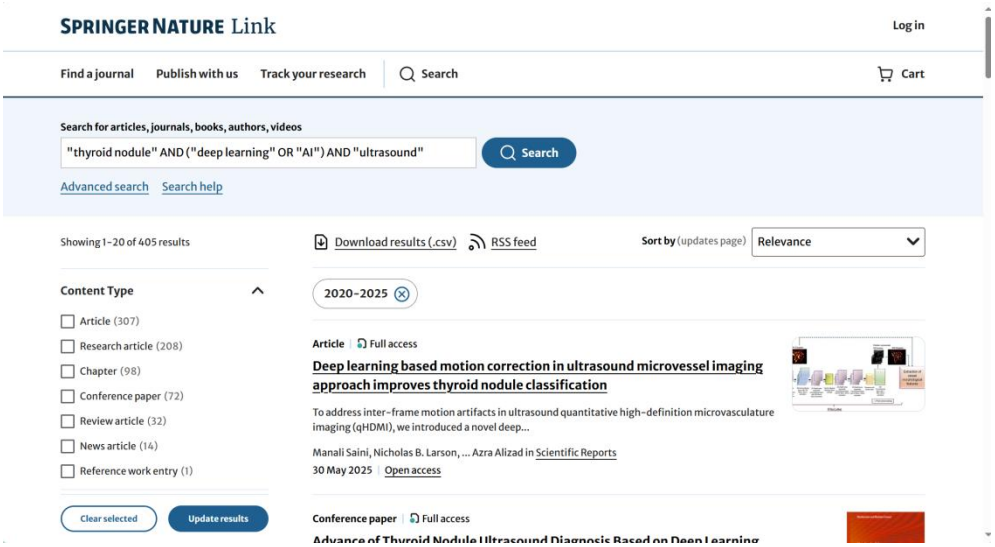


## 6) Springer

("thyroid" AND "radiology report generation")




("thyroid nodule" AND ("deep learning" OR "AI") AND "ultrasound")

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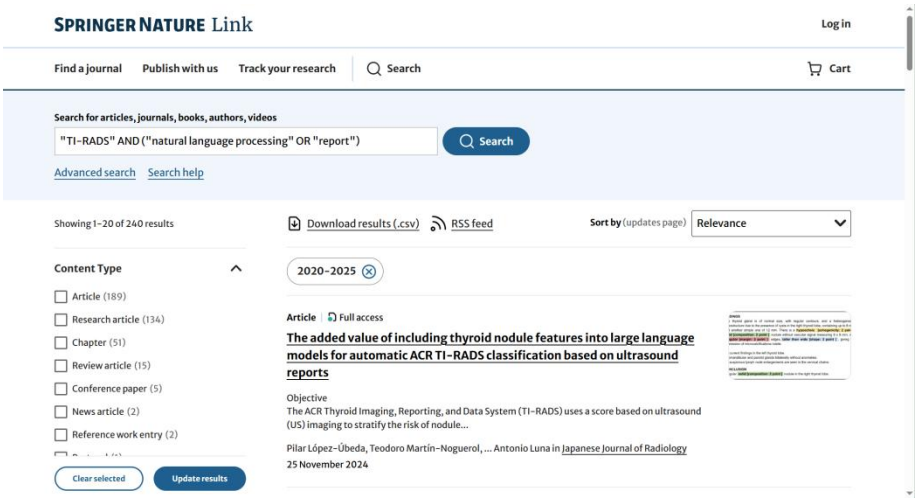

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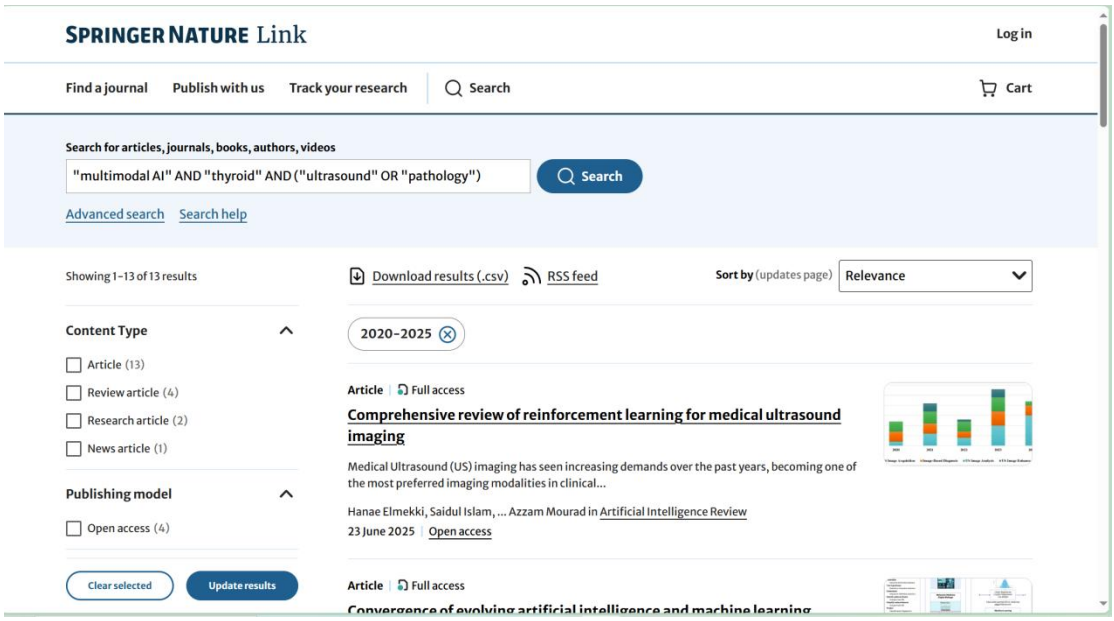


("radiology report generation" AND "deep learning")