Research Methodology: Searching the Literature

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Why learn how to search literature?

- Google query results may provide limited results and pertaining to vast fields.
- We are looking for narrow research area pertaining to our domain.
- Relevant works in our area of interest.
- Identify your broad area of interest.
- Identify 5-6 portals for research literature.

Key Computer Science Resources

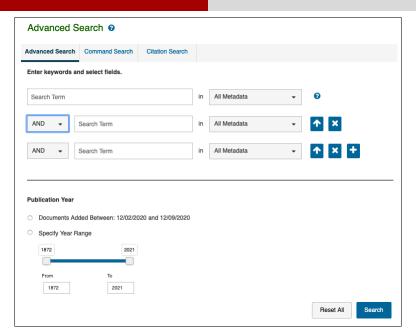
- IEEE/IET Electronic Library (IEEE Xplore)
- Lecture Notes in Computer Science (SpringerLink)
- ACM Digital Library
- Science Citation Index (Web of Science)
- Scopus
- SAGE Research Methods Online
- Science Direct
- Web of Science

Key Health Sciences Resources

- CINAHL
- MEDLINE
- COCHRANE LIBRARY
- EMBASE
- PsychINFO
- PubMed
- Web of Science

IEEE Xplore Example

- Go to home page of IEEE Xplore.
- Click on Advanced Search.
- Suppose I want to study about Data modelling for Cancer Disease.
- I use 3 search terms: Cancer, Data, Modelling.
- Since, I want papers to contain information on all three, I use AND operator.
- Cancer AND Data AND Modelling.
- IEEE Search query: ((("All Metadata":Cancer) AND "All Metadata":Data) AND "All Metadata":Modelling)
- You may use multiple search terms and different operators.
- OR Operator: When you want to search papers related to one topic but referred to by different terms.
- For example: Food, nutrition, diet, consumption behaviour, dietary habits.
- When using compound search terms enclose in curved brackets.



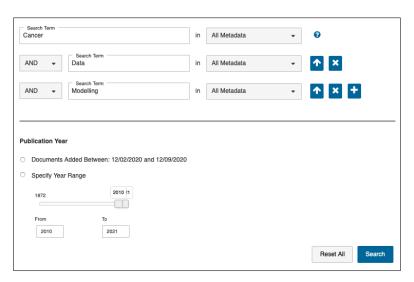


Figure 2: Snapshot of IEEE Advanced Search.

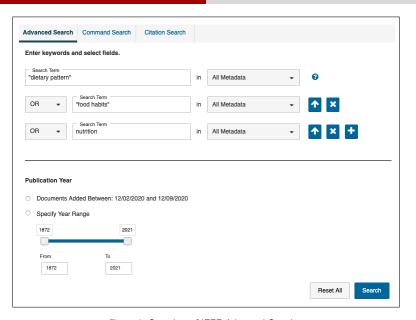


Figure 3: Snapshot of IEEE Advanced Search.

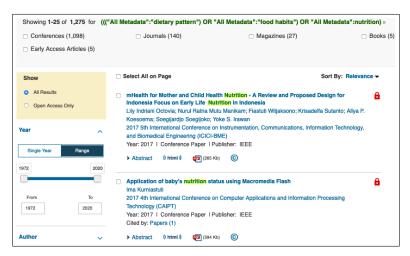


Figure 4: Snapshot of IEEE Advanced Search.

Web of Science Example

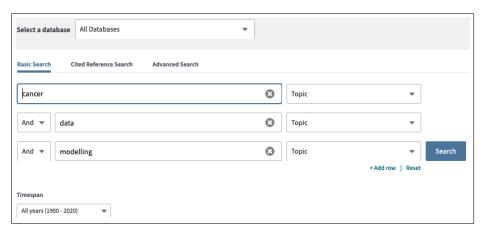


Figure 5: Snapshot of Web of Science Advanced Search.

PubMed Example

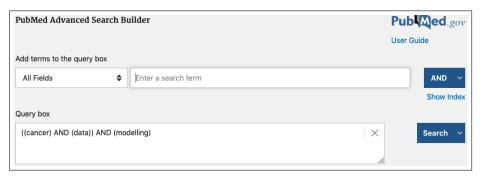


Figure 6: Snapshot of PubMed Advanced Search.

Important points

- OR operator is usually used in Scoping/Systematic Review Search.
- To search for systematic reviews search on COCHRANE REVIEWS

Recommendations to improve Searching Skills

- Attempt a scoping review in your Masters if possible, as a feasible topic for dissertation.
- Use key resources in your fields to search for literature and then use Google in the end of all searches.
- Use a Reference Manager (BibTex, Mendeley, Zootero, EndNote) to systematically store all research papers you read.

Upcoming Lectures

- Types of Research Designs: Descriptive Research.
- Experimental, Quasi-Experimental, and Ex Post Facto Designs
- Qualitative Research Methods.
- Mixed-Method Designs.
- Action Research and Participatory Designs
- Analysing Quantitative Data
- Analysing Quantitative and Mixed-Methods Data