



UNIVERSITI
TEKNOLOGI
MARA

Cawangan Negeri Sembilan
Kampus Seremban

BULETIN

*FAKULTI PERAKAUNAN
UiTM CAWANGAN NEGERI SEMBILAN
KAMPUS SEREMBAN
EDISI 9 2025*



HUBUNGI KAMI :

 [fpnuitmn9s3](https://www.facebook.com/fpnuitmn9s3)

 <https://encr.pw/FakultiPerakaunanS3>

Bibliometric Analysis using RStudio and Data Collection using PERMATA UiTM Library

Norhidayah Ismail, Saflina Azis, Siti Hawa Shuid & Syaiful Hisyam Saleh

RStudio is used to assist the researcher in collecting numerous data points for a particular topic. This article will help you learn how to use RStudio in analyzing bibliometric data.

Get Started

Before you start, the first thing you need to do is download the RStudio desktop application at the Posit website (www.posit.co). Under the tab 'Open Source', there will be a link for you to download the application. You may choose to get an open-source version of RStudio Desktop or a licensed version of RStudio Desktop Pro.



Before installing the application, RStudio requires another driver to assist RStudio, which is R 3.6.0+. You will be directed to another webpage to download R 3.6.0+ (www.cran.rstudio.com). Choose a version of R that matches your computer's operating system, whether Linux, macOS, or Windows, and follow the next instructions to download and install the R application for the first time. To install the application, you may run the R 3.6.0+ application and follow the default setting and click 'Finish' to complete the setup.

After you have the setup for the R 3.6.0+ application, now you can download the RStudio application and install the application. Again, follow the default setting given by the application until the setup has finished.

Once the RStudio application has been activated, the RStudio start-up window will appear (Figure 1). You may see a symbol of '>'. From here, you need to write 'install.packages("bibliometrix")' and press enter. Please wait for the application to run until it finishes the installation.



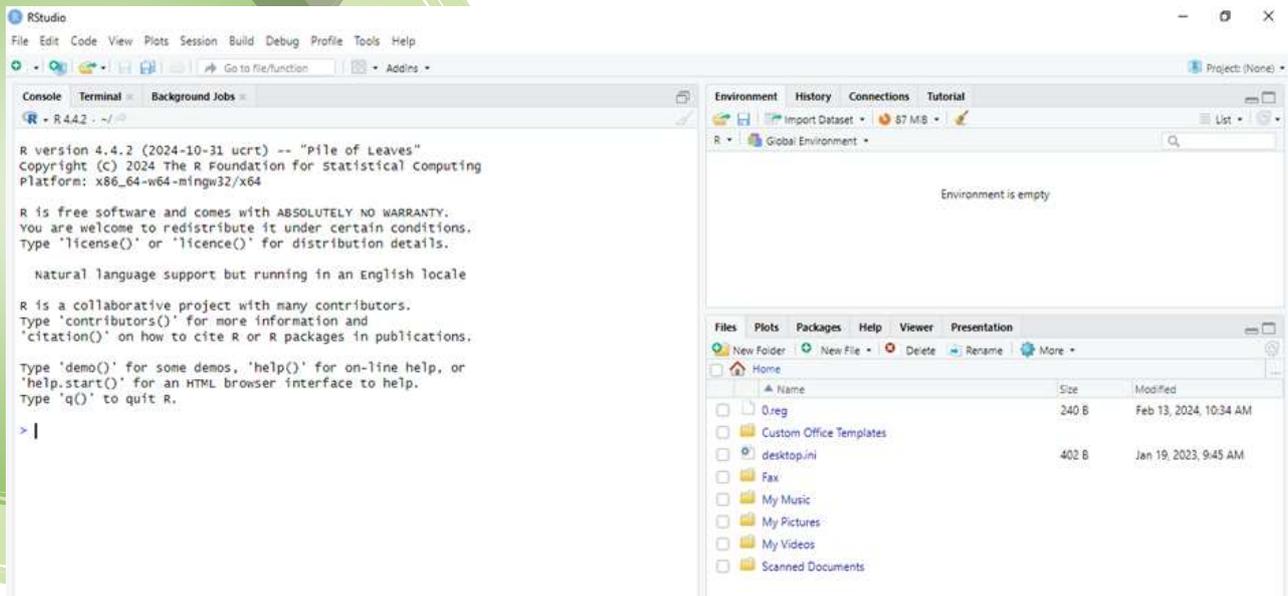


Figure 1: RStudio Start-up Window

After the installation, we must collect the relevant data to be run in RStudio to generate the results. For example, we will be using the PTAR Apps (<https://ptarapps.uitm.edu.my/loginv2/>) to collect the data. PERMATA is introduced by the Universiti Teknologi MARA (UiTM)'s library. You may use other methods in collecting the data. For UiTM users, you may log in to PERMATA using your UiTM e-mail. Under the tab 'Information Resources', there will be a tab 'Online Resources' and you click 'Online Database'. Now you may choose your preferred database to collect the data. As per the example, let's choose the Scopus database. Click the 'More' button under the Scopus database option. It will bring you to the Scopus website front page. Click the 'Advanced document search'. Before you begin to search the data, click on 'Textual Content' under the 'Field Codes'. From here, choose 'Doc Title, Abstract, Keyword (TITLE-ABS-KEY)' and click the plus symbol. 'TITLE-ABS-KEY()' will appear in the 'Enter query string' column. Now, you may begin searching for your data. You may use the 'Operators' option in your search query, such as 'AND', 'OR', 'AND NOT', 'PRE/' or 'W/' to diversify the data. After the 'Operators' option has been selected, you need to enter another 'TITLE-ABS-KEY()' to complete the search string.

Here is an example of how to write a good search string:

TITLE-ABS-KEY(education) AND TITLE-ABS-KEY(youth OR "young adult")

The data collected should be more than 500 articles after filters to get reliable results. From the documents found by the database, you may filter the data according to your preferences. The filters that are available are year, subject area, document type, language, keyword, country/territory, source type, source title, author name, publication stage, affiliation, funding sponsor, and open access. After checking the tick box for the filter, click the 'Limit to' button to refine the data. Then click the 'All' tick box, click the 'Export' tick box, and under 'File types' choose 'CSV'. The CSV file type is used for data collected from the Scopus database, while the BibTeX file type is used for data collected from the Web of Science (WoS) database. You need to choose all options and tick each of the tick boxes (Figure 2) before continuing to export the documents. You can export up to 20,000 documents in CSV format.



Figure 2: Export the Documents to CSV File Type

Bibliometric Analysis

The next step in RStudio is to write 'library(bibliometrix)' and press enter. After that, write 'biblioshiny()' and press enter to launch the shiny app for the bibliometrix webpage (Figure 3).

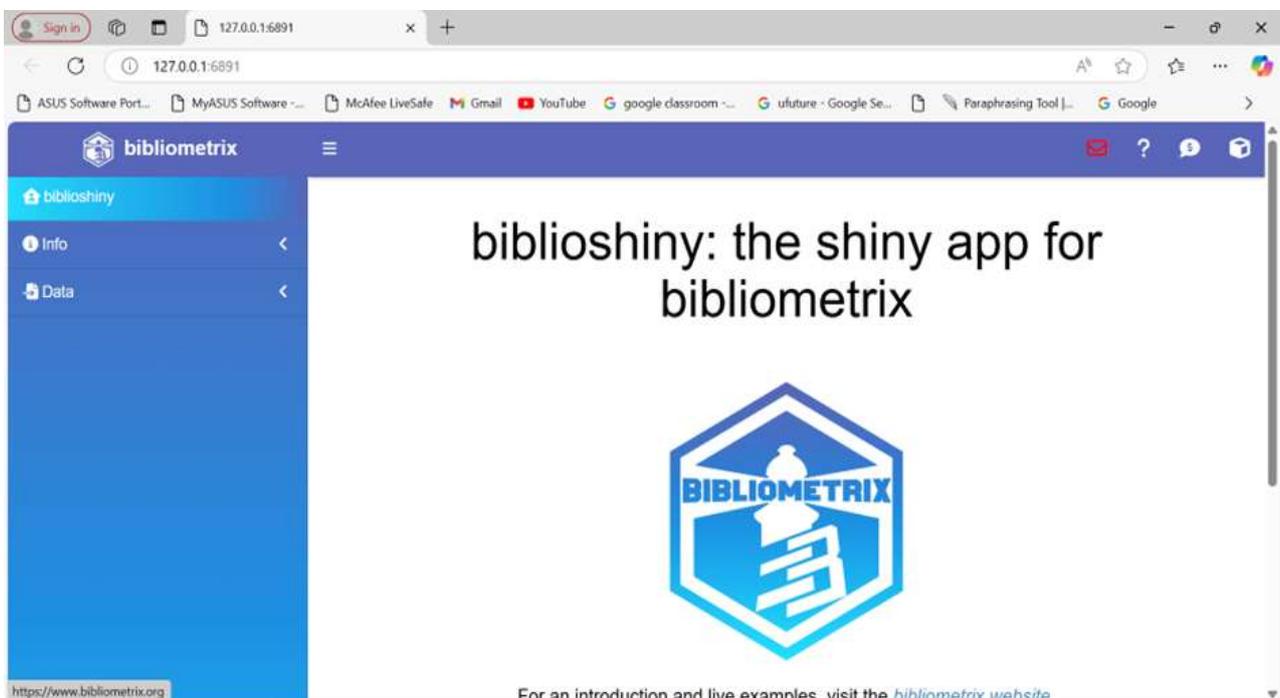


Figure 3: The Interface for Biblioshiny Webpage

Next, click the 'Data' icon on the left panel. Then click the 'Import or Load' button. You are required to choose 'Import raw file(s)'. Then, choose the database that is related to your data (e.g., Scopus, WoS/WoK) and click Browse. You need to attach the data file (CSV, BibTeX) and wait until the upload is complete. Then you may

click the ‘Start’ button for the conversion to progress. The results will appear after the completion of the conversion. You may choose the next step, whether to advise, report, or save the result. Figure 4 shows you the result after the conversion, and you may report the result according to your research objectives. You can play around with the buttons available on the right panel to look at different categories.

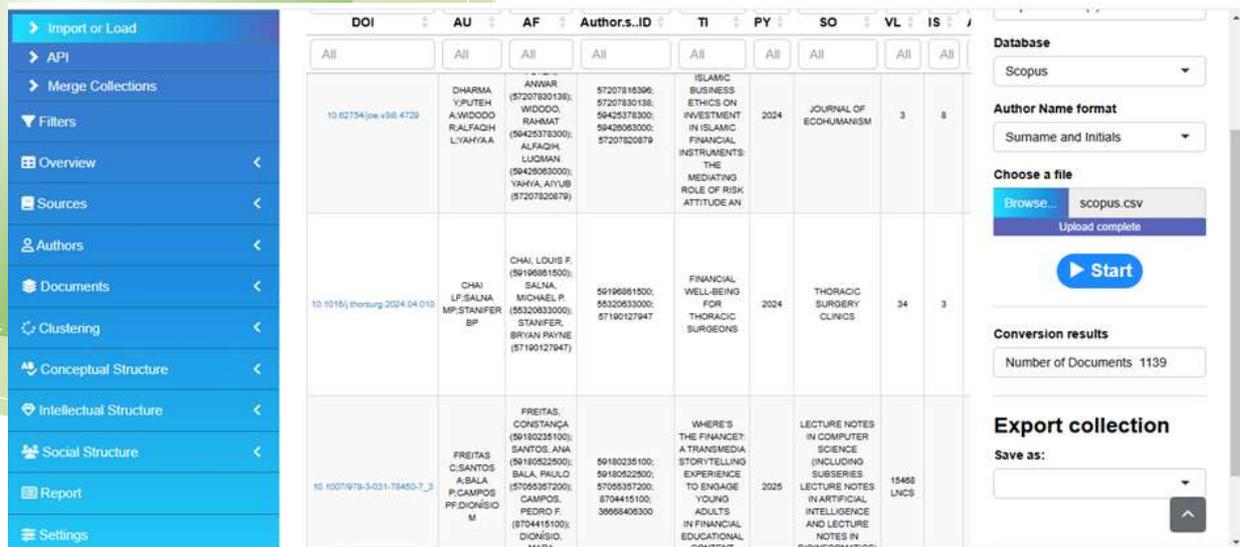


Figure 4: Result Generated from the Data using Biblioshiny

To view the results under each tab, you need to click on the play button. Then the graphs, plots, tables, figures, or maps will appear, and you can copy the illustrations to be included in the write-up. Figure 5 and Figure 6 will show you the examples of results that you can generate from the biblioshiny.

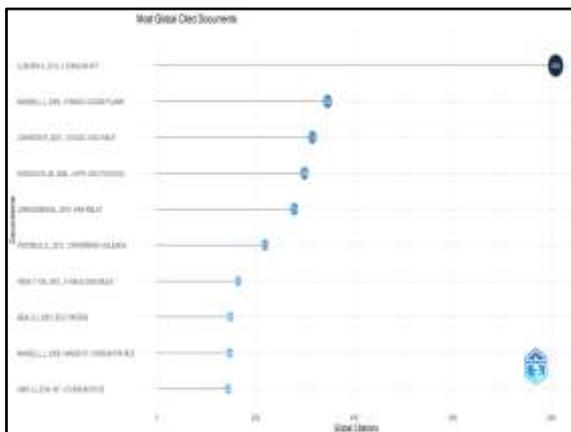


Figure 5: Sample of Results Generated from Biblioshiny

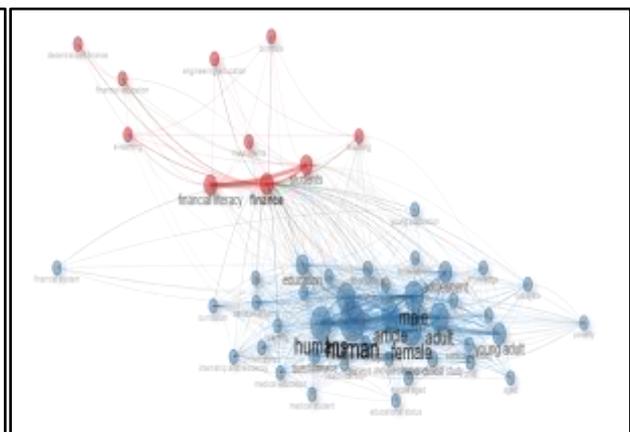


Figure 6: Sample of Results Generated from Biblioshiny

We hope that this step-by-step guide on how to collect data using the PERMATA UiTM Library and how to analyze the data using RStudio can help you in writing your research and analysis.