Biomedical Information Retrieval (P75A500)

Instructor: Prof. Jung-Hsien Chiang (蔣榮先)

Course: Tue 2-4;

Course Goals:

To understand and be able to apply information retrieval technology in automated biomedical literature search. Students will participate in intensive computer programming projects and will enhance their skills via research to various search technologies. This course also includes paper presentation and final project as well. Students will be expected to complete all course requirements upon their participation.

Course Outline

* Introduction
* Basic IR Modeling
* Retrieval Evaluation
* Document Processing
* Word Embedding
* Query Operation
* Indexing and Search
* Searching the Webs
* Social text Analytics/Image Retrieval
* BERT/ChatGPT Challenge

Textbook:

Manning, Raghavan, and Schutze, *Introduction to Information Retrieval*, Cambridge University Press, 2009

References:

Information Retrieval: Implementing and Evaluating Search Engines (MIT Press), 2010

Ricardo Baeza-Yates and Berthier Ribeiro-Neto, *Modern Information Retrieval,* Addison-Wesley Inc., 1999

Grading Policy:

Computer Assignment*	40%
Presentation**	30%
Final Course Project	30%

Note :

* 每位修課同學隔週須獨力完成一個程式專案，並上台展示(Each student was asked to do 5 software tool-based projects for different subjects bi-weekly.)

Followings are possible subjects for projects:

- Keyword-based full text matching
- Query expansion models
- Indexing models
- Image Retrieval
- Searching the PubMed Documents

** Each student requires to present 2 relevant papers by assignment.