



課 綱 Course Outline
財務金融學系學士班

中文課程名稱 Course Name in Chinese	文字探勘				
英文課程名稱 Course Name in English	Text mining				
科目代碼 Course Code	FIN_21060	班 別 Degree	學士班 Bachelor' s		
修別 Type	學程 Program	學分數 Credit(s)	3.0	時 數 Hour(s)	3.0
先修課程 Prerequisite					
課程目標 Course Objectives					
教導學生文字探勘的理論與演算法，內容包含關鍵字抽取、關鍵字權重計算、向量空間模型、二元獨立模型、貝氏分類器、Rocchio分類器、nearest neighbor、k-means分群法與階層式分群法，學生得以用之分析財經資訊。					
系教育目標 Dept.' s Education Objectives					
1	培育財務金融業之管理人 Cultivate talents with a skill of financial management.				
2	培育具備投資理財能力之人才 Cultivate talents with a skill of investment and manage finances.				
3	培育政府及企業所需之財務人才 Trains the talents needed for our nation' s economic and business environment				
系專業能力 Basic Learning Outcomes				課程目標與系專業能力相關性 Correlation between Course Objectives and Dept.' s Education Objectives	
A	具備經濟學、會計學、統計學及數學的基礎能力 Basic knowledge of the financial theory Economics, accounting, statistical and mathematica			○	
B	具備財務金融基本學理 Understanding of the development of the financial disciplin			○	
C	具備運用財務金融學理進行分析能力 Basic knowledge of financial theory analysi			●	
D	具備資料整理、書面呈現或口頭報告之能力 Basic knowledge of documentation and presentation skill			●	

E	具備財經時事基本分析能力 Capabilities for financial analysis of current affairs	●
F	具備電腦程式運算及應用基本能力 Ability of computer programs, algorithms and applications	●
G	具備英語閱讀溝通協調等基本能力 English reading ability of communication and coordination	

圖示說明Illustration：● 高度相關 Highly correlated ○ 中度相關 Moderately correlated

課程大綱 Course Outline

強調 (1) 自然語言處理工具；(2) 文字資訊在財經及商業上的應用；(3) 財經新聞資訊的擷取；(4) 中文的文字探勘；(5) R語言在文字探勘的應用

1. Overview of Text Mining
2. From Textual Information to Numerical Vectors
3. Using Text for Prediction
4. Information Retrieval and Text Mining
5. Finding Structure in a Document Collection
6. Looking for Information in Documents
7. Text clustering
8. Data Sources for Prediction: Databases, Hybrid Data and the Web
9. Text mining for Chinese
10. Applying text mining for financial prediction
11. Software for text mining
12. Case Studies

Textbook:

Sholom M. Weiss, Nitin Indurkha, Tong Zhang, Fundamentals of Predictive text Mining, Springer 2010

資源需求評估 (師資專長之聘任、儀器設備的配合 . . . 等)

Resources Required (e.g. qualifications and expertise, instrument and equipment, etc.)

多核心電腦，投影機，R統計軟體，財經新聞資料庫，Handouts

課程要求和教學方式之建議 Course Requirements and Suggested Teaching Methods

1. 由授課教師或邀請講者講解文字探勘理論，演算法與實例應用。
2. 作業包含運用文本探勘分析實際財經新聞並呈現成果。
3. 專題實作：修課學生須選擇一個議題，運用課堂上所學的方法與技術，完成文字探勘分析的報告。

其他 Miscellaneous