COURSE DETAIL

TEXT ANALYTICS AND NATURAL LANGUAGE PROCESSING IN FINANCE AND FINTECH

Country
Hong Kong

Host Institution
University of Hong Kong

Program(s)
University of Hong Kong

UCEAP Course Level
Upper Division

UCEAP Subject Area(s)
Business Administration

UCEAP Course Number
159

UCEAP Course Suffix

UCEAP Official Title
TEXT ANALYTICS AND NATURAL LANGUAGE PROCESSING IN FINANCE AND FINTECH

UCEAP Transcript Title
TEXT ANALY & NLP

UCEAP Quarter Units
5.00

UCEAP Semester Units
3.30

Course Description

This course examines the main elements of natural language processing (NLP), text analytics, and text mining, providing students with a foundation in collecting, managing, and analyzing textual data with financial and economic applications in mind, such as FinTech. Examples of potential applications include understanding and responding to sentiment in financial newspapers and social media, using social media to improve performance in asset/investment management, due diligence, Fed watching, monitoring of company events, and detecting insider trading. Although students write their own computer programs in this course, they are not required to implement most algorithms from scratch. Instead, the focus of this course is on how to use existing state-of-the-art open-source software libraries and how to apply them in a financial context. This course consists of three parts. In the first part, we work with real-world textual data sets to obtain proficiency in collecting, importing, organizing, and cleaning textual data from sources related to finance and economics. Among others, we cover web scraping, textual corpora, text processing, tokenization, stemming, and stop word removal. In the second part we delve into a more detailed analysis of NLP, text analytics, and machine learning with a particular focus on FinTech. For instance, we examine bag-of-words, word weighting schemes, document classification, document clustering, sentiment analysis, and topic models. The third part consists of summarizing, displaying, and visualizing results obtained from NLP and text analytics for applications in finance and economics.

Language(s) of Instruction
English

Host Institution Course Number
FINA4350

Host Institution Course Title

TEXT ANALYTICS AND NATURAL LANGUAGE PROCESSING IN FINANCE AND FINTECH

Host Institution Course Details

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

Course Last Reviewed
2023-2024

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