COMP 3020 SOCIAL WEB ANALYTICS

Credit Points 10

Legacy Code 300958

Coordinator Weicong Li (https://directory.westernsydney.edu.au/search/name/Weicong Li/)

Description The Social Web provides everyone with a voice; information from Facebook, Twitter and other social networks allows us to identify trends and relationships in society. Whilst this has interest on a personal level, the killer-apps will be in analysing social Web data for business, such as tracking the buzz around a new product, and understanding the relationships between customers and products. This subject will introduce its students to the Social Web data that is available, and blend data science and machine learning concepts to allow extraction and analysis of such data.

School Computer, Data & Math Sciences

Discipline Statistics

Student Contribution Band HECS Band 1 10cp

Check your fees via the Fees (https://www.westernsydney.edu.au/currentstudents/current_students/fees/) page.

Level Undergraduate Level 3 subject

Pre-requisite(s) Students who are NOT enrolled in 1837 Bachelor of Cyber Security and Behaviour 3769 Bachelor of Data Science or 3770 Bachelor of Applied Data Science must have successfully completed one the following three units
MATH 1003 Biometry
MATH 1028 Statistical Decision Making
MATH 1030 Statistics for Business

Students enrolled in 1837 Bachelor of Cyber Security and Behaviour must have successfully completed the following two units
MATH 2006 Experimental Design and Analysis AND
MATH 1002 Analytics Programming OR
COMP 1013 Analytics Programming

Co-requisite(s) For students enrolled in courses 3769 Bachelor of Data Science or 3770 Bachelor of Applied Data Science
MATH 1033 Thinking About Data

Assumed Knowledge

Students are expected to be familiar with fundamental computer programming concepts.

Learning Outcomes

On successful completion of this subject, students should be able to:
1. extract and process formatted data from social Web sources.
2. use computer algorithms to visualise complex social Web interactions.
3. use mathematical and statistical methods to identify significant trends in the social Web.
4. use mathematical and statistical techniques to identify critical regions of a social network.
5. partition a social network into clusters.
6. choose an appropriate metric to measure the interaction between social network nodes.
7. compute the popularity, authority and hub scores for network nodes.

Subject Content

Data extraction and formatting.
Visualisation of social networks.
Identifying trends in social networks.
Measuring similarity in multiple networks.
Clustering social network information
Finding authorities and hubs in a social network.

Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are regularly updated, where there is a difference your Learning Guide takes precedence.

Type	Length	Percent	Threshold	Individual/ Group Task
Short Answer	45 minutes	15	N	Individual
Report	2,000 words	25	N	Group
Quiz	15 minutes (per Quiz)	15	N	Individual
Final Exam	2 hours	45	Y	Individual

Prescribed Texts

- Russell, M. A. (2013). Mining the social web (2nd ed.). Sebastopol, CA: O'Reilly.

Teaching Periods

Spring (2023)
Campbelltown
On-site
Subject Contact Weicong Li (https://directory.westernsydney.edu.au/search/name/Weicong Li/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=COMP3020_23-SPR_CA_1#subjects)

Penrith (Kingswood)
On-site
Subject Contact Weicong Li (https://directory.westernsydney.edu.au/search/name/Weicong Li/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=COMP3020_23-SPR_KW_1#subjects)

Parramatta - Victoria Rd
On-site
Subject Contact Weicong Li (https://directory.westernsydney.edu.au/search/name/Weicong Li/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=COMP3020_23-SPR_PS_1#subjects)

Vietnam Session 3 (2023)
Vietnam
On-site
Subject Contact Weicong Li (https://directory.westernsydney.edu.au/search/name/Weicong Li/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=COMP3020_23-UT3_UE_1#subjects)

Sydney City Campus - Term 3 (2023)
Sydney City
On-site
Subject Contact Antoinette Cevenini (https://directory.westernsydney.edu.au/search/name/Antoinette Cevenini/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=COMP3020_23-SC3_SC_1#subjects)

Vietnam Session 2 (2024)
Vietnam
On-site
Subject Contact Weicong Li (https://directory.westernsydney.edu.au/search/name/Weicong Li/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=COMP3020_24-UT2_UE_1#subjects)

Spring (2024)
Campbelltown
On-site
Subject Contact Weicong Li (https://directory.westernsydney.edu.au/search/name/Weicong Li/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=COMP3020_24-SPR_CA_1#subjects)

Penrith (Kingswood)
On-site
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