

# University of Westminster

## School of Electronics and Computer Science

### 7BUI5025W Web and Social Media Assessment Specification (2021/22)

<b>Module leader</b>	Dr Philip Worrall
<b>Units</b>	Coursework 1 – Social media Assignment – CW1
<b>Weighting:</b>	CW1 60%
<b>Qualifying mark</b>	40%
<b>Description</b>	Collect, analyse and interpret web and social media data
<b>Covered Learning Outcomes</b>	<p><b>Coursework 1</b></p> <p>LO4 - Construct and critique a semantic model of a social media conversation for the purpose of deducing user opinion, collecting feedback and using it to inform product and or marketing decisions.</p> <p>LO5 - Produce a report that comprehensively evaluates an individual's/organisation's current social media position.</p>
<b>Handed Out:</b>	<b>Coursework 1 - 5.30pm Thursday 31st March 2022</b>
<b>Due Dates</b>	<b>Coursework 1 - 1pm Monday 9th May 2022</b>
<b>Expected deliverables</b>	<p>Submit on Blackboard the following components:</p> <p>1 <b>In Coursework 1 – Social Media Assignment</b></p> <ul style="list-style-type: none"> <li>○ <b>Coursework answers and code</b> (one file, pdf or docx format)</li> <li>○ The submission link is contained within the assessment folder</li> <li>○ Completely individually</li> </ul>
<b>Method of Submission:</b>	Electronic submission on BB via a provided link in the assessment folder on BB.
<b>Type of Feedback and Due Date:</b>	<p>Written feedback on the CW submission will be provided within 3 weeks after the submission (the mark and comments on marking scheme form via BB Rubric).</p> <p>The ICT is marked automatically but each submission will be manually reviewed. Feedback will be provided within 3 weeks after submission (the mark and any relevant comments)</p> <p>All marks remain provisional until formally agreed by an Assessment Board.</p>
<b>BCS Criteria meeting in this assignment</b>	<p>2.1.1 Knowledge and understanding of facts, concepts, principles &amp; theories</p> <p>2.1.2 Use of such knowledge in modelling and design</p> <p>2.1.3 Problem solving strategies</p> <p>2.2.2 Evaluate systems in terms of quality and trade-offs</p> <p>2.2.4 Deploy tools effectively</p> <p>2.3.2 Development of general transferable skills</p> <p>3.1.1 Deploy systems to meet business goals</p> <p>3.2.2 Defining problems, managing design process and evaluating outcomes</p> <p>4.1.1 Knowledge and understanding of scientific and engineering principles</p>

**Assessment regulations**

Refer to Part 3: Assessment regulations for taught courses of the guide for postgraduate students for a clarification of how you are assessed, penalties and late submissions, what constitutes plagiarism etc.

<https://www.westminster.ac.uk/sites/default/public-files/general-documents/handbook-of-academic-regulations-2020.pdf>

**Penalty for Late Submission**

If you submit your coursework late but within 24 hours or one working day of the specified deadline, 10 marks will be deducted from the final mark, as a penalty for late submission, except for work which obtains a mark in the range 50 – 59%, in which case the mark will be capped at the pass mark (50%). If you submit your coursework more than 24 hours or more than one working day after the specified deadline you will be given a mark of zero for the work in question unless a claim of Mitigating Circumstances has been submitted and accepted as valid.

It is recognised that on occasion, illness or a personal crisis can mean that you fail to submit a piece of work on time. In such cases you must inform the Campus Office in writing on a mitigating circumstances form, giving the reason for your late or non-submission. You must provide relevant documentary evidence with the form. This information will be reported to the relevant Assessment Board that will decide whether the mark of zero shall stand. For more detailed information regarding University Assessment Regulations, please refer to the following website: <https://www.westminster.ac.uk/current-students/guides-and-policies/academic-matters/academic-regulations>.

# Coursework 1 – Social Media Assignment

## OVERVIEW

During the lectures and tutorials, we have discussed the role of social media and some of the techniques and tools both individuals and organisations can use to analyse and interpret social media data. The aim of this coursework is therefore to assess your ability to collect social media data, prepare social media data for analysis and use relevant tools and techniques to extract useful insight.

The coursework consists of a series of **3 questions**. You are required to provide answers to **ALL** questions and this coursework must be completed **INDIVIDUALLY**. The number of marks available for each question is provided in the right-hand margin. The total number of marks available is 100.

This assessment carries **60%** of the total marks for this module.

## COURSEWORK SUBMISSION

You are required to submit your answers to this coursework via Blackboard on or before **1pm Monday 9th May 2022**. Your submission should be in either PDF or Microsoft Word (.doc/.docx) format. The word limit for this coursework is **5000** words (not including graphs, tables and figures). You should ensure that you label each of your answers with the question number that you are attempting to answer.

The first page of your submission should consist of a front cover, including: your name, student ID, the module code, title of this module and a word count. Otherwise, your name and student ID should not appear anywhere else on your submission.

**Case Study 1 – Market Research Agency**

You have been hired by an agency that conducts market research. The agency currently uses a range of traditional market research methods to gauge consumer opinion, including consumer surveys and panel interviews.

You are tasked with writing a report to critical evaluate the use of social media for the purposes of collecting consumer feedback about a product or service. Your report will be read by the managers of the agency and used to determine their future social media strategy.

**Question 1**

**Write a report that critically evaluates the use of social media for consumer opinion mining.**

In your answer you **MUST**:

- Provide an accurate, critical, and impartial perspective
- Define the terms *social media* and *consumer opinion mining*
- Discuss different strategies for collecting social media data
- Compare and contrast with traditional market research methods
- Discuss any existing models or methodologies that might be relevant
- Define and explain any technical terms that you use
- Cite appropriate case studies or examples from industry
- Write in a formal tone

**[33 Marks]**

**Case Study 2 – Breaking News**

You have begun working for an online news organisation that provides commentary and news articles relating to breaking events and trending stories. The news organisation is exploring ways to identify important stories using social media data and would like your assistance.

**Question 2**

- A) Using a suitable approach collect a series of tweets between the hours of 9am and 6pm on a given weekday. Document your approach and provide annotated screenshots so that co-workers would be able to understand and follow the same process. In your answer you should justify any keywords used to collect your tweets and provide a table showing the number of tweets collected.

**[10 Marks]**

- B) Explain what is meant by pre-processing in the context of social media data and apply one pre-processing step to your collected data. In your answer you should provide annotated screenshots to illustrate the effect that it has had on your dataset.

**[3 Marks]**

- C) Using a suitable technique produce a series of graphs to illustrate.

- i) The number of tweets posted per hour
- ii) The top 10 most active users by the number of tweets posted

**[6 Marks]**

- D) Create a Python program to identify the most popular hashtags present in your dataset and use it to generate a “word cloud”. In your answer you should document your approach and provide annotated screenshots so that co-workers would be able to understand and follow the same process

**[6 Marks]**

- E) Using a suitable approach, construct a LDA topic model to identify themes of discussion within your dataset. In your answer you should document your approach, include a table of results and discussion of your findings. Your answer should include critical evaluation of the LDA methodology.

**[13 Marks]**

**Case Study 3 – Celebrity Profile**

A public relations (PR) company has contacted you to carry out an independent appraisal of one of their client's social media accounts.

For the purposes of this question, you can decide which famous person or celebrity you would like to analyse for your case study. You should however ensure that there is sufficient conversational data posted about them on Twitter to be able to answer the following questions.

**Question 3**

- A) Conduct an initial review of your chosen celebrity's social media presence and identify 5 sets of keywords, phrases or hashtags that are associated with their account. In your answer you should document your approach and justify your choice of keywords.

**[4 Marks]**

- B) Using your knowledge of the social media modelling process and keywords identified previously, collect, and prepare a social media dataset surrounding your chosen celebrity. In your answer you should document your approach and provide annotated screenshots so that co-workers would be able to understand and follow the same process. The collected tweets should span a 3-day period and you should indicate how many tweets were collected.

**[10 Marks]**

- C) Develop and construct an appropriate sentiment model to identify sentiments expressed towards your chosen celebrity. In your answer you should:

- Discuss what is meant by the term sentiment modelling
- Provide details of the steps you have carried out to build your model
- Use any tables or charts you believe are necessary to illustrate your findings
- Provide a critical evaluation of your model

**[15 Marks]**