

Small project

Start Assignment

- Due 23 Apr by 14:00
- Points 30
- Submitting a file upload
- File types py, doc, pdf, docx, and odt
- Available 8 Mar at 18:00 - 25 Apr at 23:59

Basic information


Title: Coding project
% of final grade: 30%
Format of submission: Python code + short report
Duration: at least 6 weeks

The submission deadline is: 23 April 2024, 14:00

This assignment will be available until: 25 April 2024, 23:59


- Important:
- a) Angles are in radians, unless stated otherwise;
 - b) When rounding, you must keep at least two significant digits

The instruction for this assignment is available in

- 1) The assignment brief: **Project brief** (<https://herts.instructure.com/courses/111972/files/8503499?wrap=1>) 
(https://herts.instructure.com/courses/111972/files/8503499/download?download_frd=1)
- 2) Important **announcements** concerning this project:
https://herts.instructure.com/courses/111972/discussion_topics/671790
(https://herts.instructure.com/courses/111972/discussion_topics/671790)

You must read both documents carefully before submitting this assignment.

Data required for this project can be downloaded using the links below

Last digit of student ID number	File 1	File 2
0	2020input0.csv (https://herts.instructure.com/courses/111972/files/8417845?wrap=1)  (https://herts.instructure.com/courses/111972/files/8417845/download?download_frd=1)	2024input0.csv (https://herts.instructure.com/courses/111972/files/8417845?wrap=1)  (https://herts.instructure.com/courses/111972/files/8417845/download?download_frd=1)

1	2020input1.csv ↓ (https://herts.instructure.com/courses/111972/files/8417846/download?download_frd=1)	2024input1.csv ↓ (https://herts.instructure.com/courses/111972/files/8417846/download?download_frd=1)
2	2020input2.csv ↓ (https://herts.instructure.com/courses/111972/files/8417847/download?download_frd=1)	2024input2.csv ↓ (https://herts.instructure.com/courses/111972/files/8417847/download?download_frd=1)
3	2020input3.csv ↓ (https://herts.instructure.com/courses/111972/files/8417848/download?download_frd=1) (https://herts.instructure.com/courses/111972/files/8417849?wrap=1)	2024input3.csv ↓ (https://herts.instructure.com/courses/111972/files/8417848/download?download_frd=1)
4	2020input4.csv ↓ (https://herts.instructure.com/courses/111972/files/8417849/download?download_frd=1)	2024input4.csv ↓ (https://herts.instructure.com/courses/111972/files/8417849/download?download_frd=1)
5	2020input5.csv ↓ (https://herts.instructure.com/courses/111972/files/8417850/download?download_frd=1)	2024input5.csv ↓ (https://herts.instructure.com/courses/111972/files/8417850/download?download_frd=1)
6	2020input6.csv ↓ (https://herts.instructure.com/courses/111972/files/8417851/download?download_frd=1)	2024input6.csv ↓ (https://herts.instructure.com/courses/111972/files/8417851/download?download_frd=1)
7	2020input7.csv ↓ (https://herts.instructure.com/courses/111972/files/8417852/download?download_frd=1) (https://herts.instructure.com/courses/111972/files/8417853?wrap=1)	2024input7.csv ↓ (https://herts.instructure.com/courses/111972/files/8417852/download?download_frd=1)
8	2020input8.csv ↓ (https://herts.instructure.com/courses/111972/files/8417853/download?download_frd=1) (https://herts.instructure.com/courses/111972/files/8417854?wrap=1)	2024input8.csv ↓ (https://herts.instructure.com/courses/111972/files/8417853/download?download_frd=1)
9	2020input9.csv ↓	2024input9.csv ↓

This assignment assesses the following module learning outcomes:

- Demonstrate knowledge and understanding of relevant computational algorithms and the fundamentals of probability, information and statistical methods
- Demonstrate knowledge and understanding of producing appropriate algorithms for solving data analysis problems
- Be able to apply basic mathematical skills to simple data science problems
- Be able to choose and apply suitable algorithms to analyse a given dataset

Additional information for students

- The automated Canvas lateness penalty will apply to submissions after **Due** time but before **Available Until** time.
- Submissions after Available Until time will **NOT** be accepted. If you miss the deadline, (a) you may be eligible to apply for Serious Adverse Circumstances: <https://ask.herts.ac.uk/serious-adverse-circumstances-sac> (<https://ask.herts.ac.uk/serious-adverse-circumstances-sac>) or (b) UPR AS14 D52.2.2 and D5.2.2.3 will apply (*"Where a module numeric grade of 19 or less has been achieved through unintended non-submission of coursework or non-attendance at an examination or in-class test, Module Boards and Short Course Boards have the discretion to award a FREFE/FREFC/FREFB status code"*).
- This is an individual assignment. Regulations governing academic integrity and academic misconduct apply, see: https://www.herts.ac.uk/_data/assets/pdf_file/0007/237625/AS14-Apx3-Academic-Misconduct.pdf (https://www.herts.ac.uk/_data/assets/pdf_file/0007/237625/AS14-Apx3-Academic-Misconduct.pdf).
- For postgraduate modules a score of 50% or above represents a pass mark

Criteria	Ratings				Pts
Code and plot	10 to >8.0 Pts Full marks The code reads the data, creates and displays correct distributions as histograms or (normalized) probability distribution functions. The plot has appropriate	8 to >5.0 Pts Reduced mark The code reads the data, creates and displays the distribution. However, the plot is difficult to read because of inadequate (or missing) axis ranges, labels, titles, colours, or	5 to >2.5 Pts Partial mark The code reads the data, creates and plots the distributions, but at least one of the distributions is incorrect AND/OR	2.5 to >0 Pts No marks There are critical errors in the code (e.g. it does not work even after some obvious errors corrected), or the code is	10 pts
Problems / Thought value	10 to >8.0 Pts Full marks All five required values are correct and shown on the graph with appropriate labels and units	8 to >5.0 Pts Reduced mark Three or four of the required values are shown on the graph and correct	5 to >2.5 Pts Partial mark At least two of the required values are shown on the graph and correct	2.5 to >0 Pts No marks At least four of the required values are incorrect or not shown on the graph	10 pts
Report	10 to >8.0 Pts Full marks The report briefly describes the data; clearly explains what was calculated and how (correct terms and equations are given for all five of the required values); briefly describes the results; adequate technical terms and language are used; the graph produced by the code is included	8 to >5.0 Pts Reduced mark The reports satisfies the criteria for the full mark, however, is difficult to read because of inadequate or misleading terms or language AND/OR contains some minor errors in the	5 to >2.5 Pts Partial mark The report contains one or more major errors (in the text or equations)	2.5 to >0 Pts No marks The report contains a number of major errors, or is missing	10 pts
Total points: 30					