The learning outcomes that are assessed by this coursework are: 1. To be able to create a fully functional fuzzy inference system of your choosing. 2. To be able to identify and create suitable input and output variables for your system, with an appropriate rule base and inference engine. 3. To be able to report and articulate upon the evolution and journey of the system. Tasks to be undertaken: You are to design, build, test and evaluate a fuzzy logic inference system. The system itself will be of your choosing, however, there must be a minimum of 3 input variables, and at least 1 output variable. As this is somewhat open-ended, you are expected to survey the relevant literature for guidance and inspiration. The system itself can be tested on theoretical data (create your own indicative data), or real world data. The fuzzy logic system will be accompanied by a detailed report. The report MUST NOT exceed 12 pages. If 12 pages is exceeded, you will not lose marks, I will however stop marking after 12 pages: × The references/bibliography will NOT BE included in the page count. × The title page, table of contents and abstract, if you decide to include them will NOT BE included in the page count. × The appendices, if you decide to use appendices will NOT BE included in the page count. × Everything included in the main body of the report WILL BE included in the page count. To provide enough detail to obtain the higher marks, you should aim to satisfy the mark scheme. Deliverables to be submitted for assessment: × A single uploaded report which will provide a similarity index. DO NOT exceed 25% similarity: × You could adopt if you wish, the following structure or variation of: × Title Page, table of contents, abstract (NOT included in page count). × Introduction (Possibly 0.5 pages). × A review of relevant literature (Possibly 2 pages). × An overview of your approach to this problem (Possibly 2 pages). × A technical description of your fuzzy system including, variables, set, rulebase and And/Or/Implication/Defuzzification operator choice with justification (Possibly 3.5 pages). × Experimental design and evaluation - performance of your fuzzy system including the design and results of an experiment (Possibly 2 pages). × Critical reflection (Possibly a single page). × Conclusion (Possibly a single page). × Bibliography, references, cited works (NOT included in page count). × Appendices - Optional (NOT included in page count). × A zipped folder containing: the project code - this will include ALL MATLAB file(s) (.m file) and any external file(s) such as data files and any additional files.