Engineering Track: Technical Paper Expectations

B351 / Q351

For students who are submitting engineering track projects, we have the following expectations for your technical paper:

1. Is roughly 1500-3000 words in length;
2. Is ideally typeset in LaTeX (consider using TexStudio or TexMaker), but regardless of the original format, your final submission must be a PDF;
3. Contains your project title and team member names;
4. Contains a description of your problem space;
   (a) What are the rules / constraints / objectives?
   (b) What are the major challenges?
   (c) What are the different variations that you might encounter?
   (d) Any other pertinent information?
5. Contains a description of the techniques you implemented;
   (a) What algorithms are you using?
   (b) How do they work?
   (c) What is the time / space complexity?
   (d) What are the limitations?
   (e) What were some alternatives?
6. Describes how your solution models human thought processes.
7. Shows an empirical analysis of your algorithms, either versus other algorithms or in different scenarios (or, ideally, both);
   (a) Present your findings in graphs and/or tables (NOT a giant paragraph of text).
   (b) Why did you get these results?
   (c) Were the results what you expected?
   (d) What do the results imply about the problem space?
   (e) Anything else of interest?
8. If you made use of outside code (from sources such as StackExchange, etc), includes a short explanation of the following for each code snippet **in addition to your in-code comments attributing sources**;
   (a) Explains how the code snippet is used in your program;
   (b) Explains, in your own words, how each code snippet works;
   (c) Attributes the source of each code snippet, including author name (if possible, or username) and source URL;
9. Provides an explanation of how your work could have been expanded or improved
   (a) What improvements would you make to the AI?
   (b) What lessons did you learn?
   (c) Anything else of interest?