Suggestions:

- (Introduction), the hook is a little awkward.
- (Introduction, sentence 2) "painstakingly" is too dramatic.
- (Introduction, sentence 4) sentence fragment.
- (Introduction, sentence 6) "The present paper" is a little awkward, you should generally avoid using third-person articles when referencing oneself, "This paper" suffices.
- (Introduction, sentence 7) Love to see the Oxford comma!
- (Introduction, sentence 7) "finite set of simple rules" is a bit redundant, is there anything substantive that changes with an "infinite set of simple rules"?

- (Structure, sentence 2) Without listing what each "primary component" is, this section doesn't flow very well. Further, are there any components that make the tape and head the "primary" ones, if not then "primary" is redundant.
- (Structure, sentence 4) Restructuring this sentence would help it flow better.
- (Structure, sentence 6) "[…] the head may […]", "the head" is redundant.
- (Structure, sentence 9) Potential typo, "initial conditions of chaos theory" should (?) be "initial conditions of chaotic systems".
- (Structure, sentence 10) Could use some slight rewording.

- (Usage) The sample machine is an excellent inclusion.
- (Usage, sentence 8) This sentence is a bit redundant.
- (Usage, sentence 9) Consider using the terminology from chaos theory (in this case, deterministic) to better connect Turing machines to complexity.
- (Usage, sentence 10) I'm not entirely sure that this is "[a]nalogous to the butterfly effect" (perhaps if one were to randomly change the configuration there would be a wild departure, but it wouldn't be due to "small variations that escape our notice"), it may be more precise to argue that the sequence produced by the Turning machine is highly sensitive to initial conditions.
- (Usage, sentence 11) This sentence is perhaps better suited to the Versatility section, alternatively see below the general comments.
- (Usage, sentences 12, 13, 14) While I understand that your argument is that one configuration can produce a sequence with the complexity of π, π itself is not "unpredictable", indeed there are many series that converge to π, such as Leibniz's formula. Perhaps there are better examples?
- (Usage) Good concluding remarks for the paragraph.

- (Versatility) First few sentences could use some restructuring to flow better.
- (Versatility, sentence 4) "tapped into […] potential", is a cliché, consider rewording.
- (Versatility, sentence 4) This sentence is also a bit redundant.
- (Versatility, sentence 5) "[…] mathematician first and foremost" HA! Maybe a bit informal.

- (Versatility, sentence 6) What exactly is the difference between a Turing machine and a Universal machine? Clarification needed.
- (Versatility) Good concluding remarks for the paragraph.

- (Conclusion, sentence 3) "[…] basis chaos theory" basic is redundant. Further, don't undersell yourself in the conclusion!
- (Conclusion) Last sentence is unnecessarily provocative

General comments:

Grammatically speaking: there are few uses of improper (imprecise or informal) word choice, incorrect prepositions, unnecessary commas, passive voice misuse, and redundant modifiers or sentences. Minor revisions and a pass through Grammarly should do the trick!

Structurally speaking: at present (that is, without adding to each or either section), I'm not sure if distinguishing between Usage and Versatility contributes anything to your paper and it may be cleaner to do away with the partition. Otherwise, the structure of your paper is well-constructed.

You have done an excellent job of presenting the Turing machine, particularly in terms of how it relates to complexity, though I would have liked to see you expand on many of your ideas/arguments. Besides the example of π, the ideas are very sound and logical.

The emphasis on Turing's work as theory instead of engineering (while needing to be slightly reworded) and the inclusion of the sample machine are creative and original and help to demonstrate your ideas.