This assignment focuses on the need for rigorous software engineering techniques. Write a thoughtful 1-2 page (single-spaced, 11-point font, 1-inch margins) critique on the potential negative impacts when ad hoc software engineering techniques are used in the development of safety-critical applications.

After reading the Therac-25 paper and the articles on Toyota’s unintended acceleration article, write a 1-page critique that addresses the following points.

1. Summarize the problems that caused the accidents for the Therac-25 system and the Toyota unintended acceleration.

2. What types of software engineering mistakes are common between the Therac-25 and Toyota cases? What mistakes were specific to each case? Explain your answers.

3. What could/should have been done differently to prevent such tragedies? Your answer should refer to technological advances and/or human factors and/or organizational factors.

4. Describe 3 key (research) challenges in software engineering that need to be addressed to prevent software-related injuries in the future? Explain the rationale for these challenges, including potential strategies for tackling them.

Your critique will be evaluated according to the following criteria:

- Have you presented a cohesive write up? (Do not submit short answers for each of the above points. The critique should be read as one document.)

- Have you addressed all of the technical points, using concrete examples to support your arguments?

- Does each paragraph have a thesis sentence with the paragraph body containing supporting text?

- Has the document been thoroughly proofread and typos eliminated?