High level Summary of HW1

CSE 435
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Please see CSE435 Writing Tips for more details
Introduction

• Give a brief background for what we are talking about
  • Example: The Therac 25 is a radiation therapy machine that massively overdosed patients.

• Clearly state your thesis
  • Who is at fault? Be clear and state the party
Paragraphs

• Each paragraph should discuss a specific point
  • E.g., ACEL is at fault because they failed to do x
  • E.g., The hospital staff is at fault because they failed to do y

• The rest of the paragraph should then construct an argument and analyse the given evidence pieces to support
• Introduction (thesis sentence)
  • Clearly state what is the purpose of this paragraph, make a claim
  • E.g., ACEL is at fault because they selected to remove critical hardware interlocks in the Therac 25, leading to the radiation overdoses in 6 patients.

• Evidence
  • Cited evidence from credible source (not Wikipedia)
  • E.g., The previous models, Therac 20 and Therac 6, included an additional hw interlock that prevented accidental application of radiation [1]

• Analysis
  • The failure of safety critical systems can lead to injury and death of people, as such, multiple layers of protections should be in place. By removing the additional layer of protection, AECL failed to prevent and mitigate potential danger to the patients.

• Conclusion/tie back to thesis
  • If ACEL had retained the hardware interlock, then several incidents due to software failure could have been prevented. As such, AECL failed to ensure safety for the patients and is at fault for the Therac 25 incident
Some small things

• Be formal and concise
  • No first person: “I think”, “I believe”, etc.
  • Clearly state your claim and give the evidence
  • Make sure each sentence is clear and concise. One point per sentence

• Avoid appealing to emotional words
  • E.g., tragic accident, unacceptable, outrageous, etc.

• Omit irrelevant/fluffy writing
  • Each paragraph should directly contribute to what you want to tell the reader with your thesis statement

• Acronyms: Spell out and define on first use, then use acronym for rest
ChatGPT

- ChatGPT does not give oracle answers
  - It is a machine learning algorithm at the end of the day
  - It learns relationship between words and infers them back when you ask it
  - This means that it is trained on a large number of text data (where does it come from?)
- It is true that we can use AI to answer questions (such as chatbots)
  - How do we know it can be trusted?
  - How do we train such model?
  - Therac is private, how does ChatGPT know anything about the inner workings of the machine?
"I spend a lot of time on this task. I should write a program automating it!"

**THEORY:**

WORK

WRITING CODE

AUTOMATION TAKES OVER

FREE TIME

WORK ON ORIGINAL TASK

**REALITY:**

WORK

WRITING CODE

DEBUGGING

ONGOING DEVELOPMENT

RETHINKING

NO TIME FOR ORIGINAL TASK ANYMORE

TIME

https://xkcd.com/1319/