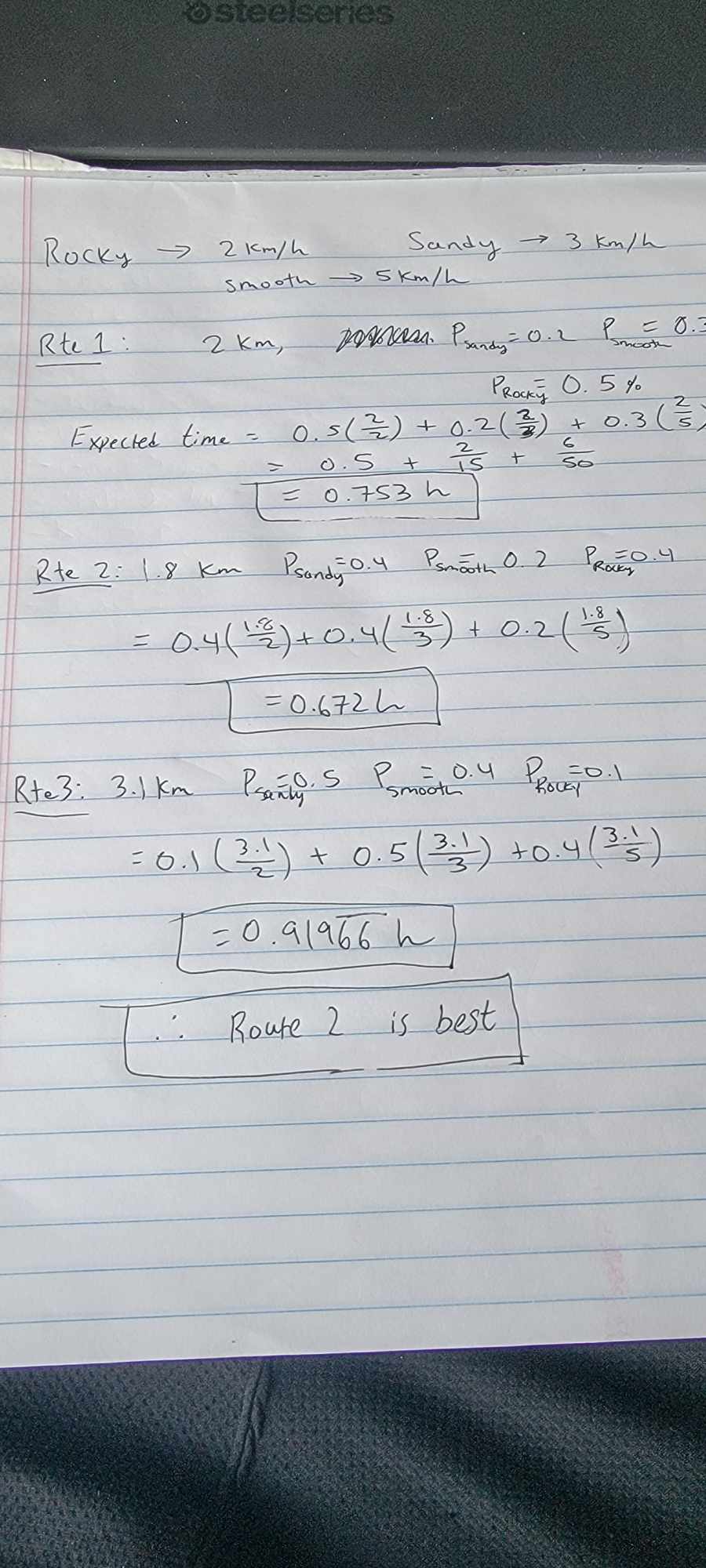
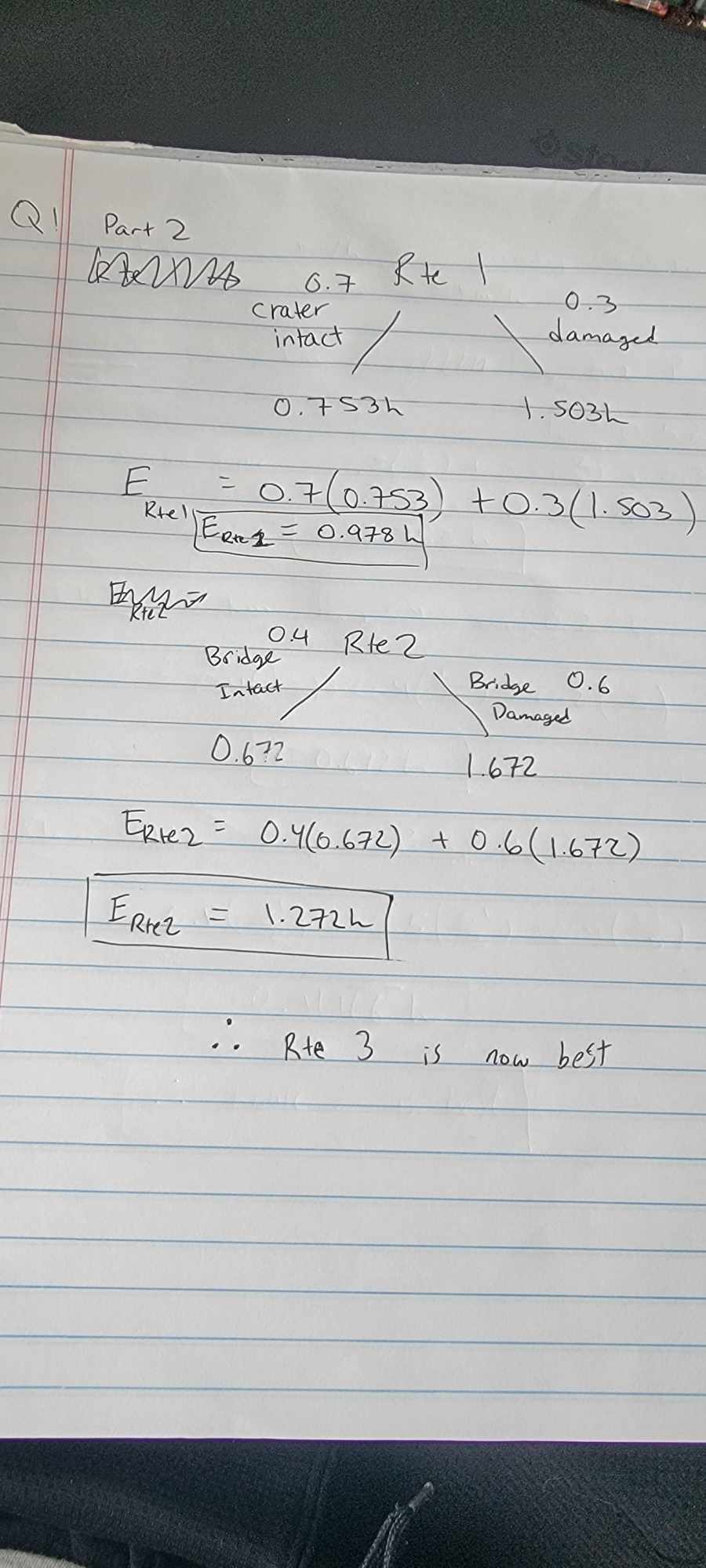
Assignment 5: HMMs, Bayesian Networks, and Decisions

## Question 1





Part 3

Without any info from the satellite we know route 3 is smooth 40% of the time. When it is smooth, route 3 is the best option. When it is rocky or sandy route 1 becomes the best option.

If route 3 is smooth, T = 0.62. On average, without knowledge of smooth vs rocky, route 3 takes ~0.92hr.

Factoring in route 1 we can say that T\_estimate = (0.4\*0.62) +(0.6\*0.978) ~= 0.84hr

Thus our delta T would be T3\_smooth – T\_estimate, which is 0.92 – 0.84 ~ 0.08 hrs.

The amount of time we are willing to wait is equal to this delta T, so we would be willing to wait up to 0.08 hrs or 4.8 minutes for this information

## Question 4

1. What are the three dimensions along which Big Tech has an advantage in AI?

The three dimensions mentioned in the article are the data advantage, computational power, and talent pool. The data advantage is a result of the massive user base each of these tech giants has; the resulting wealth of data gives them a significant edge in training AI models. Their large amount of computational power is a result of their power computing infrastructures and access to top hardware, and these companies will naturally attract top talent due to their high compensation packages and reputation as a company. These all stem from the massive amount of resources and capital afforded to these companies.

1. Why does AI Now think it's important to focus on Big Tech?

Due to the profound and pervasive impact that AI development has (and will continue to have) on society, AI Now believes that it is vital to scrutinize the concentration of power in Big Tech. The overarching potential that these companies have to influence so many facets of society can be incredibly dangerous, and as a result it is paramount that we do not leave this influence unchecked.

1. Priority 1 discusses Algorithmic Accountability. What does this mean? Why is it important to shift responsibility for detecting harm on companies themselves?

Algorithmic Accountability is the responsibility of companies to verify that their models are fair, transparent, and not causing harm. Putting the burden on companies to detect harm themselves allows us to proactively prevent AI from causing harm, rather than reactively making amends once harm is identified. This is vital since the reach that such harm could have is massive and overturning such disasters may prove difficult.

1. What are the windows for action that are identified? Which do you personally think are the most effective or promising?

Some windows for action that were identified: contain big tech’s data advantage, build support for competition reforms, regulate large scale models, and have policy responses other than audits. I’ve always been a strong believer in competition reforms and antitrust in all facets, and this is especially true when it comes to artificial intelligence. Monopolies allow companies to get complacent and care less about the product they are putting out, as even if they make mistakes there is no competition that will make them pay for it. This is terrifying in the scope of artificial intelligence and must be avoided at all costs – any incentive for these companies to be more careful about the harm their product causes is entirely necessary

1. The executive summary contains this quote:

"These are only a handful of examples, and what they make clear is that there is nothing about artificial intelligence that is inevitable. Only once we stop seeing AI as synonymous with progress can we establish popular control over the trajectory of these technologies and meaningfully confront their serious social, economic, and political impacts—from exacerbating patterns of inequality in housing, credit, healthcare, and education to inhibiting workers’ ability to organize and incentivizing content production that is deleterious to young people’s mental and physical health."

Do you agree with this assessment? How might we rethink our relationship with AI and with technology in order to avoid these potential negative outcomes?

My answer:

Rather than getting lost in the ‘hype’ behind artificial intelligence and blindly pushing for any improvement, we should accept that this will be a belabored process and that taking time to slow down and analyze the impact of any development is worth the time. We should look to see how AI can improve our lives and make day to day human existence easier, rather than just seeing how strong we can make artificial intelligence

ChatGPT’s answer:  
The quote raises valid concerns about the potential negative impacts of artificial intelligence (AI) on various aspects of society. I agree with the assessment that there is nothing inherently inevitable about the trajectory of AI, and it is crucial to recognize that AI is a tool created and shaped by humans. To avoid the mentioned potential negative outcomes, we need to rethink our relationship with AI and technology in several ways:

1. **Ethical Considerations:**
   * Prioritize ethical considerations in the development and deployment of AI technologies. Establish clear guidelines and standards to ensure responsible and fair use.
2. **Transparency and Accountability:**
   * Promote transparency in AI algorithms and decision-making processes. Users and stakeholders should have visibility into how AI systems operate to build trust.
3. **Inclusive Design:**
   * Foster inclusivity in AI development by involving diverse voices and perspectives. Ensure that AI systems are designed to address and mitigate biases rather than reinforce existing societal inequalities.
4. **Regulation and Oversight:**
   * Implement regulatory frameworks that govern the ethical use of AI. Governments, industry, and academia should collaborate to establish standards and oversight mechanisms to prevent misuse.
5. **Education and Awareness:**
   * Increase public awareness and understanding of AI. Empower individuals to make informed decisions about the use of AI in their lives and advocate for their rights.
6. **Human-Centric AI:**
   * Prioritize the development of AI systems that augment human capabilities rather than replace them. Strive for human-centric AI solutions that enhance societal well-being.
7. **Interdisciplinary Collaboration:**
   * Encourage interdisciplinary collaboration between technologists, policymakers, ethicists, and social scientists. This approach can provide a holistic understanding of the implications of AI on society.
8. **Continuous Evaluation:**
   * Regularly evaluate the impact of AI systems on society and be open to adapting regulations and policies as technology evolves. Continuous evaluation ensures that our approach remains adaptive to emerging challenges.

By adopting these principles, we can work towards a future where AI is developed and used responsibly, minimizing negative impacts and promoting a more equitable and inclusive society.

The main thing I notice is the difference in length between the two answers. ChatGPT is known for being verbose and it confirms that bias here. It highlights some of the same things I said (human-centric AI, continuous evaluation and regulation/oversight) but approaches these from a more ‘textbook’ standpoint and less of a human view.