

### **Part IV: Calculus II Final Project**

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“Artificial intelligence (AI) is technology that enables computers and machines to simulate human learning, comprehension, problem solving, decision making, creativity and autonomy” (Stryker & Kavlakoglu, 2024). Ethical usage of AI in mathematics refers to using it as a learning material rather than a shortcut. AI can help you understand concepts, guide you through procedures and help you elaborate on topics which are rather difficult for you to understand and not just give you the final answer. You should be only turning in work that you are learning from and not AI because it truly defeats the purpose of your education. AI is not fully developed yet so it is important to check for mistakes such as miscalculations or logical errors. It is also important to be honest about when you used AI and how it helped you with the process or idea. Being honest with the professor to where you used AI shows academic integrity and allows the professor to see what you have learned or worked on independently. It allows you to see your growth as a learner using technology rather than replacing your effort.

I think that students should be given the freedom to use AI in mathematics if they are using it responsibly. AI is helpful for explaining difficult concepts or giving hints when you are stuck. However, relying on it too much can affect your development of problem solving skills. Students should double check their work to ensure that they are understanding the material. AI encourages curiosity by helping students see different ways to solve the same problem and build problem solving habits over time.

When we build models, we choose variables. If we leave out important ones, the model can be unfair. Fairness is essential in mathematical modelling as the data and variables we choose to work with can affect people. If we rely on incorrect data or biased factors, the output will be greatly affected and provide unfair results. AI is prone to repeating biased information and spreading inequality in areas such as education, healthcare and job opportunities. Ethical

usage of AI refers to double checking the math problem and its data and how they must reflect accuracy. Double checking is not always about fixing issues but rather AI being fair to every human being and it should never support discrimination. We can help build a society where technology supports equality rather than injustice by building fair mathematical models.

Learning to use AI responsibly and fairly is important as it shapes how we think, work and make choices in the future. Technology is all around us and it will be an important part of our life in the future so we will have to rely on technology to assist us with our problems but the work that we do reflects accuracy and honesty. Knowing the correct way to use AI shows us that we are not dependent on it and we know when it provides incorrect output. AI helps to maintain trust between us, our employers and our employees. We use AI in communities for fairness and allows us to not misuse technology that can harm and affect individuals. Society needs people who can use new technology responsibly, efficiently and with honesty. Learning to use AI fairly helps us create solutions that benefit everyone, not just for money or convenience. By building new habits, we can grow into trustworthy and responsible citizens in a world where technology surrounds us.

## References

Stryker, C., & Kavlakoglu, E. (2024, August 9). *What is artificial intelligence (AI)?* IBM.

<https://www.ibm.com/think/topics/artificial-intelligence>