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CS 3600

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CS 3600 Project 1 Wrapper

Question 2:

When adjusting the speed limit, it would make these roads less attractive to drivers and A* would be less likely to choose them as they are less efficient. However, this approach does not guarantee that cars never cut through neighborhood as some drivers might still consider them to be more time efficient especially during traffic jams. Additionally, this approach would not prevent the people who live in the neighborhood from generating routes to and from their home since these routes might be less convenient but at the end there is only one way to get to their home: through their neighborhood. The second approach of increasing the heuristic values of intersections in neighborhood will make them less optimal for the A* algorithm. Therefore, A* will be less inclined to consider them when calculating routes. While this approach does discourage drivers from cutting through, it doesn't completely stop them as some drivers who are familiar with the area might know that the artificially increased heuristic value is higher than the actual. Additionally, people who live in the neighborhood would still be able to generate routes to and from their homes.

Question 3:

Route planning systems like Google Maps and other navigation apps have had both positive and negative impacts on jobs and industries. Navigation apps created navigation and delivery jobs in form of drivers for ride-sharing services and delivery services as well as jobs in customer service and user support to provide better user experience for navigation. It has also led to the growth of e-commerce and online shopping as route planning systems help these companies optimize their delivery routes, reduce fuel costs, and improve efficiency. However, they also had negative impacts. Some negative impacts include displacement of jobs in traditional taxi services as they face competition from ride-sharing drivers who rely on navigation apps. They have also had an impact on map production as traditional maps are no longer in demand. Lastly, route planning systems have raised privacy concerns through the collection of location data.

Question 4:

Reliance on artificial intelligence route planning systems have caused individuals to become overly reliant on their navigation apps to the point where they stop actively engaging with their surroundings leading to a reduced spatial awareness and navigation skills. Some more undesirable impacts include risk of disorientation, inefficient decision-making, and over-reliance on technology. Because most people no longer use an actual map to navigate to their destination, we lost the skill set to read maps efficiently and have also led to bad decision making when navigating as we are not used to carrying out those mental actions since route planning systems do all of that for us.