CPSC 470 Autonomous Vehicles: a 5G use case discussion

# Learning objectives:

* Understand principles of Autonomous Vehicles (AVs) using 5G
* Identify data privacy and ethical issue surrounding Autonomous vehicles
* Evaluate and analyze principles presented via a classroom discussion

# Read the first article listed below (you are welcome to read the entire article!):

* The Role of 5G Technologies in a Smart City: The Case for Intelligent Transportation System (section 3 and 4): <https://www.mdpi.com/2071-1050/13/9/5188>
* Thinking Through the Ethics of New Tech…Before There’s a Problem: <https://hbr.org/2021/11/thinking-through-the-ethics-of-new-techbefore-theres-a-problem>

# Answer the following reflection questions:

1. Discuss what features 5G technology brings into support (and advance) the AVs.
2. What are the safety aspects to be considered for vehicle platooning and remote driving in V2X? According to you, do AVs increase or decrease the risk of accidents? How could companies safely develop such technologies?
3. Are you concerned about safety of data collected from cars by AI technology, i.e., how safe do you feel with your data collected, stored and transmitted across the Internet? Would you be more concerned if it was much more personal information such as bank or health or social media data?
4. How can the AV companies collect data ethically? What ethical implications do you see with data being collected?
5. Ethical decision making: are AVs capable of making right decisions, i.e., make a fair judgement particularly before a collision? What legal and ethical framework would you consider for building Avs?
6. What do you envision the future of AV to be?

**Discussion Steps (to be held in class):**

This discussion is meant to get you to think deeper about privacy and ethical issues surrounding while giving more time to process compared to synchronous discussions. You will:

1. Read/watch the provided material above.
2. Post your own reflection post with answers to questions above (within one week from discussion opening).
3. You are welcome to respond to other’s threads.
4. Participate in class discussion based on questions you posted earlier.