COR160
Essential Academic Writing Skills

Tutor-Marked Assignment 01

January 2018 Presentation

TUTOR-MARKED ASSIGNMENT 01

This tutor-marked assignment is worth 45% of the final mark for COR160 Essential Academic Writing Skills.

The cut-off date for this assignment is <u>2355hrs on 09 February 2018.</u>
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Submit your solution document in the form of a *single* MS Word file on or before the cut-off date shown above.

Additional instructions:

1.   You will need to indicate clearly on the front page your name, student ID, course title and assignment number. Note also the following:

   - ✓ Spacing (between the lines): 1.5 or double spacing
   - ✓ Font style: Arial or Times New Roman preferred
   - ✓ Font size: 12 preferred (min 11 and max 13)

2.   Summarise using your own words as much as possible. You must document all information that you use from another source, or you will be penalized severely. You must acknowledge these by using the APA documentation style. This includes both **in-text citations** and **end-of-text referencing**.

3.   If you copy from the work of another student, regardless of the course or programme, **you will be severely penalized**. You are **not permitted** to re-use material from past assignments whether in part or in full. All of the above actions can result in your **failing the TMA**.

*Remember that **<u>accurate</u>** and **<u>proper</u>** documentation of information from secondary sources is essential because SUSS takes a very serious view on ***<u>plagiarism</u>***. All information from secondary sources will be detected by the Turnitin software that your assignment will be put through in Canvas and anything that is not acknowledged and properly documented will be taken as an instance of plagiarism and your assignment may be failed.

Scope

You will find Chapters 3 (Critical Reading), 7 (Summary, Paraphrase, Quotation), 8a (Synthesizing), 8b (Synthesizing Sources) and 9 (Locating, Mining and Citing Sources) in your COR160 textbook useful. Refer also to the relevant on-line study units.

Learning outcomes

- Cite sources in writing using the proper citation and referencing style.

- Evaluate information critically from various sources to respond to a task.

- Synthesise information from various sources in writing in response to a given task.

- Develop a rhetorical structure of an essay.

Question 1

Driverless vehicles: A vision for Singapore's transport

Imagine being able to get where you want to go, whenever you want, without the stress of driving. Imagine a neighbourhood with green and open spaces, with roads that are safe.

The future of Singapore's transport system could bring greater mobility for the elderly and the disabled.

The enabling technology? Driverless vehicles.

Exciting times

Autonomous Vehicle (AV) technology is now coming into its own. Automakers have shifted their driverless vehicle research and development into top gear. Cities are racing to set up their regulatory and liability frameworks to facilitate the deployment of AVs.

AV promises a more efficient transportation solution and lower environmental footprint by optimising road usage. In Singapore, the North-East and Downtown MRT lines, and LRT already use driverless technology to improve the punctuality of our mass transport and overcome our manpower constraints.

AV-enabled mobility could be a central feature in our future town-planning, enabling commuters to get around effortlessly by offering first- and last-mile connectivity within neighbourhoods. The sharing of autonomous vehicles will reduce the number of vehicles on the roads, thereby increasing convenience to commuters.

Charting new territory

To this end, the Committee on Autonomous Road Transport for Singapore (CARTS) has been set up to chart the strategic direction for AV-enabled land mobility concepts in Singapore. Its members include renowned international experts, academics and industry representatives.

To support the visioning work of CARTS, LTA signed a Memorandum of Understanding with Singapore's lead R&D agency, A*STAR, to set up the Singapore Autonomous Vehicle Initiative (SAVI), which will explore the technological possibilities that AVs can create for Singapore.

Vision into reality

Progress has been swift, with several AV research and development trials already underway. The public can try out the driverless buggies in the Jurong Lake District and the NUS campus; or the autonomous shuttle bus running from the NTU campus to Cleantech Park.

On 1 January 2015, One-North will host the first public road network for the testing of driverless vehicles. Connecting Biopolis, Fusionopolis and Mediapolis, the test course comprises both light and heavy traffic routes, under real traffic conditions.

A peek into the future

10 to 15 years down the road, an AV might take your children to school, before bringing you to work. Rather than being left unused at the carpark, it could then be routed to drop your parents off at the market. Such an automated system could enable car-sharing in a wider sense, with a potential to reduce passenger vehicles to a third of current numbers, according to a 2011 MIT study in Singapore.

Even freight transport can be transformed. As a major air and shipping hub, Singapore has much to gain from developments in this area. With automated transport, we could be less reliant on manpower, and see improvements in safety and productivity. Optimised routes and schedules will boost performance and help keep our country at the top of the trade.

A "Smart Nation"

Efficient, environmentally friendly, time-saving and stress free, AVs could transform our lifestyles.

Given the new challenges our city-state faces with a growing population and limited land area, a combination of new technology, new business models and forward-thinking regulation is needed to meet our needs. And AVs will play their part in this.

- Adapted from Ministry of Transport website: https://www.mot.gov.sg/Transport-Matters/Motoring/Driverless-vehicles--A-vision-for-Singapore-s-transport/

There has been much discussion in the media with regard to the recent move by the Singapore government to introduce driverless vehicles on Singapore roads. Many issues in

relation to the implementation of such vehicles have been debated in the discussions. The two articles provided below reflect some of the sentiments regarding this issue.

In **about 750 words**, write a synthesis essay on the *factors that must be taken into consideration in implementing driverless vehicles on Singapore roads*. You must formulate a thesis about this issue and provide evidence that will support your thesis. The thesis for this TMA01 is a viewpoint that does not have to be persuasive – that is, it is the conclusion you arrive at based on summarising and synthesising the information you researched on this topic. Relevant information for you to gather would be:

- Issues (safety or ethical or legal or economic or etc.) surrounding driverless vehicles
- Evidence for driverless vehicles
- Evidence against driverless vehicles
- Improvements to existing efforts to introduce driverless vehicles

(100 marks)

Guidance Notes

1. Use process writing to develop a rhetorical structure for your essay.

2. Strengthen your thesis with relevant **examples and illustrations**.

3. You may include any additional but *relevant* information to the ideas that have already been given in the scenario and articles.

4. You should use **at least 5 research sources** to help you write your essay. The given articles are considered as a separate research source each and can count towards the 5 research sources. Synthesise information from these various sources in your writing.

5. You are to use credible and reliable sources to help you write this essay. Evaluate information critically from various sources in your response. **Marks will be deducted for non-credible and unreliable content.**

6. Remember to use accurate grammar, correct sentence structures and a tone appropriate to academic writing. Cite sources in your writing using the proper citation and referencing style. **Marks will be deducted for poor English.**

Article 1:

Driverless cars picking up speed in Singapore

LAST UPDATED 03 NOVEMBER 2017

Challenges remain, but Singapore is pushing ahead with efforts to be a leading player in autonomous transport.

By Annabelle Liang

Last August, tech start-up <u>nuTonomy</u> became the world's first company to offer invite-only driverless taxi rides here in Singapore. The MIT spin-off company followed this landmark achievement a month later by announcing a partnership with ride-hailing company Grab that aims to make driverless rides available to the wider public.

Driverless vehicles operated by nuTonomy have been travelling around a designated circuit within the one-north district since 2015, as part of an autonomous vehicle (AV) trial. The circuit has almost doubled in length to some 12km since the start of the trial.

The high-profile initiative is just one of Singapore's many efforts to use artificial intelligence (AI) in the transport sector. Last year, the Government unveiled plans to introduce such technology to mass transport services for intra- and inter-town travel, on-demand shuttle services, freight transport, and utility operations such as road sweeping.

This rising buzz of activity reflects Singapore's efforts to become one of the leading players in a global shift towards autonomous transport.

Benefits for society
Novelty aside, the emergence of autonomous vehicles will result in a host of benefits for the country, beyond just the financial. These range from greater fuel efficiency and reduced road congestion to helping relieve demands on labour and land.

"Autonomous vehicles are fast on its[sic] way to becoming a reality on our roads...They can enhance the efficiency and convenience of our land transportation system. Thus, it is

important that we do not impede their growth as some cities have done," said Singapore's Second Minister for Transport Ng Chee Meng in Parliament in February this year.

More significantly, experts believe that AV could also save lives by reducing the number of accidents on the road. A study by US-based non-profit Eno Centre for Transportation showed that if 90 per cent of the cars on American roads were driverless, the number of accidents would fall from 5.5 million to 1.3 million a year, and road deaths from 32,400 to 11,300.

As driverless vehicles are designed to optimise efficiency, they would also boost fuel efficiency and, as a result, reduce carbon emissions. A [study](#) by consultants McKinsey estimated that the adoption of autonomous cars could reduce CO2 emissions by as much as 300 million tons per year.

Meanwhile, the elderly and disabled persons, such as the blind[,] may finally have a chance to "drive" independently with an autonomous vehicle, improving their quality of life significantly.

A tricky road ahead?

Despite the enormous potential of autonomous transport, there are still issues to be sorted out. On the ethical front, some have questioned who would be liable in an accident involving a vehicle with no driver. And while regulations around the world have focused on physical safety, far less has been said on the issues of privacy and cybersecurity.

Autonomous vehicles require constant real-time communications between their users and the environment around them. The data collected in this process can include personal details such as location and driving habits that are valuable to marketers.

Even now, certain cars feature advanced sensors that can determine if a child is on board. Such data can be used by retailers to push kid-friendly offers to the parents who are in the vicinity, for instance. Meanwhile, research has shown that vehicle controls are potentially vulnerable to hacks if there are inadequate security measures in place.

"We are a long way from securing the non-autonomous vehicles, let alone the autonomous

ones," said Stefan Savage, computer science professor at the University of California-San Diego, in *MIT Technology Review* last year.

A Global Race

Singapore is jostling with other countries to take the lead in the AV space, with at least 25 companies in the race. Google has been running trials in Texas and California, even as fellow tech giant Uber acquired self-driving trucking company Otto in August.

Closer to home, Japanese car maker Nissan has been testing a prototype AV since 2013, while the Korean government granted a temporary license plate to its first driverless car, a Hyundai Genesis, in March 2016.

Despite the progress, Minister Ng reckons that it could take 10 to 15 years for the technology to be widely deployed here. "As AV technology is not yet mature, during trials, accidents are not to be unexpected. LTA will, therefore, put in place a robust regulatory framework to minimise the possibility of accidents," he said at a press conference in February this year, according to Channel NewsAsia.

Progressively, he added, the government will put in place programmes to help Singaporeans who drive for a living, acquire new skills, and take on higher value-added jobs in an AV world.

Source Link: https://www.imda.gov.sg/infocomm-and-media-news/whats-trending/2017/2/driverless-cars-picking-up-speed-in-singapore

Article 2:

Can driverless cars survive Singaporean road users?

Jeremy Au Yong
Deputy News Editor
PUBLISHED
NOV 26, 2017, 5:00 AM SGT

Human drivers cutting into their lane may be the least of multiple hazards faced by such AI cars

As the country careens towards the reality of driverless cars on the roads, it is time we discuss an important ethics question that has been ignored for too long: Will robot drivers survive contact with Singaporean road users?

This past week, the Government unveiled plans for robot buses to operate in three towns by 2022. That means, in just about four years, we are going to have cold, calculating robot drivers sharing our roads with human Singaporeans.

The mere thought of it gives me grave concern ... for the robots.

Now I know some people might think that I'm some kind of weird robot lover who has things the wrong way around.

"Shouldn't you be more worried about robots on our roads with the potential to kill us," you are no doubt saying.

And indeed, if one were to Google 'driverless vehicles,' one would find many articles where the primary concern is how these machines are going to deal with ethical problems.

One famous example frequently brought up involves a modern-day version of the thought experiment known as the trolley problem.

Imagine one day you are in a driverless vehicle going along your merry way when the brakes suddenly malfunction. You and the car are now heading straight for a group of school children crossing the street. The car could swerve to miss them but it would then plunge off a cliff, invariably killing you.

The scenario throws up numerous difficult questions.

How should the car solve this problem? Would it be able to make the same moral calculations that a human can?

And could we ever be satisfied with either solution given that a machine has made a decision

about who should live and who should die?

These are important philosophical problems that I'm sure will ultimately require several billions dollars [in] legal fees to resolve. But I find myself not entirely absorbed by them.

For one thing, I believe instances where a machine would have to make this kind of decision will be incredibly rare – so much so that I think the number of lives lost in this manner would be infinitesimal compared to the number of lives saved by drivers that never get drunk, never fall asleep, always stick to their lanes, always observe the speed limit, do not check WhatsApp messages while driving and would never decide it's a good idea to eat durians in the car while chucking the husk and seed out of the window (true story).

However, I believe we may never get to the point where driverless cars can have this sort of positive impact if they are allowed to operate under real-world, everyday Singaporean road conditions.

We have to go from zero to 100 per cent driverless vehicles at once or I fear the project will be snuffed out before it has had a chance to work.

Why do I say that?

I mean, ask any driver/pedestrian/cyclist and they'll tell you: Road users here can be real %!#@$.

Mix robot drivers with humans and there will be only two possible outcomes:

1) Passengers in driverless cars take forever to get anywhere.

2) Driverless cars become some of the most competitive, hyper-aggressive robots known to man – possibly heralding the dawn of the robot apocalypse.

Let's start with the first possibility. Given my understanding of how driverless cars are programmed, they will be the most polite, rule-observing, obliging cars on the road.

The rest of human road users would thus instantly detect this weakness and exploit it. A passenger hoping to ride a driverless car to work during rush hour would find his ride being constantly cut off by human drivers who fail to signal.

The driverless vehicle will end up immobilised in the middle of the PIE, unable to move forward because its human cousins are always cutting into its lane. And it can't change lanes because human drivers consider giving way the equivalent of getting an involuntary lobotomy.

Going driverless: The future of Singapore's transport system
And these are just your more run-of-the-mill Singaporean road users. God knows how the driverless car will deal with that guy who reverses into you and then accuses you of driving into him; or that guy who does not understand the concept of a yellow box and insists on stopping in it even if it means blocking traffic.

What about that guy who rides an e-scooter on the expressway believing it's a motorbike; or that guy who rides his $10,000 racing bicycle in the middle of the road because he believes that his legs can propel him at the same speed as a two-litre turbo engine.

Then there is that pedestrian who leaps on the car hood feigning injury in the hopes of getting some kind of payout; that guy who plays the braking game; and whatever other genius way of using the road somebody will eventually come up with.

I am sure any driverless car will malfunction within minutes of exposure to real Singapore road conditions.

Of course, they don't have to be programmed this way. They are, after all, artificially intelligent machines that can learn and adapt over time. That's where I fear the second scenario – one where driverless cars essentially learn how to drive on Singapore roads. These robots will then be able to anticipate, counteract and beat road users at their own game.

The Singaporean driverless car, would become – in essence – an uber kiasu driver (as opposed to a kiasu Uber driver).

Imagine having to confront an army of focused, tireless, unrelenting Singaporean drivers.

There will be only one way to stop them: ERP.

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