SIT719 Analytics for Security and Privacy

Pass Task 1.1: Understanding the Unit

Overview

This unit will provide you with a unique learning experience that ties in two concurrent cybersecurity disciplines, namely, data science and cyber-security. With the dramatic development of the Internet, Information Technology, and mobile devices, we are witnessing a great age of information. At the same time, security and privacy in cyberspace have become a critical problem for everyone, every company, and every nation.

This unit provides you with learning experiences that explore the potential privacy and security of information and how analytics can be utilized to solve some of these challenges. Finally, you will study the ethical implications of dealing with large datasets and privacy associated analytics. All these topics will be explored through scaffolded programming assignments. Weekly assessment tasks will be submitted via OnTrack system. At the end of the unit, students will have a solid grounding in how modern analytics work and how they can be applied to network defence.

This is a Pass task, so you **MUST** complete the task and submit the evidence of your work to Ontrack.

Instruction:

This week task is simple where you start preparing yourself for the whole trimester. Please read the below comments and once you are ok with everything mentioned in this document, **submit the PDF using OnTrack**. **A word version is added in the resource file in OnTrack.**

Section 1

Write the answer to the following queries:

Q1. What are the Unit Learning Outcomes (ULOs)? Hint: you may find at the first-week class slides or look at the unit guide.

Answer1:

ULO1 – I learn how to write scripts to handle big sets of data that you often see in cybersecurity, and get familiar with the popular tools used to create analytics.

ULO2 – I get to know and use the right ethical, legal, and management rules that affect how organizations and professionals handle data and analytics.

ULO3 – I get a basic understanding of how supervised and unsupervised machine learning works, including the simple math behind them, and learn how to use common libraries to apply these algorithms.

ULO4 – I learn how analytics can help protect computer networks, what kind of data from network defences is useful for creating analytics, and see which attacks have been successfully stopped by current technologies and where improvements are needed.

ULO5 – I understand the technical risks to privacy that can come from using analytics in cybersecurity.

Q2. Have you received the Github link?
Answer: Yes

Q3. Are you familiar with Google Colab and confident to run github codes on colab?
Answer: Yes

Q4. Please write briefly about the concept of portfolio-based unit. (If not sure follow the first-week class lecture)

Answer:

A **portfolio-based** unit at Deakin focuses on learning through practical tasks rather than exams. Students complete different assignments and projects throughout the unit to show what they've learned.

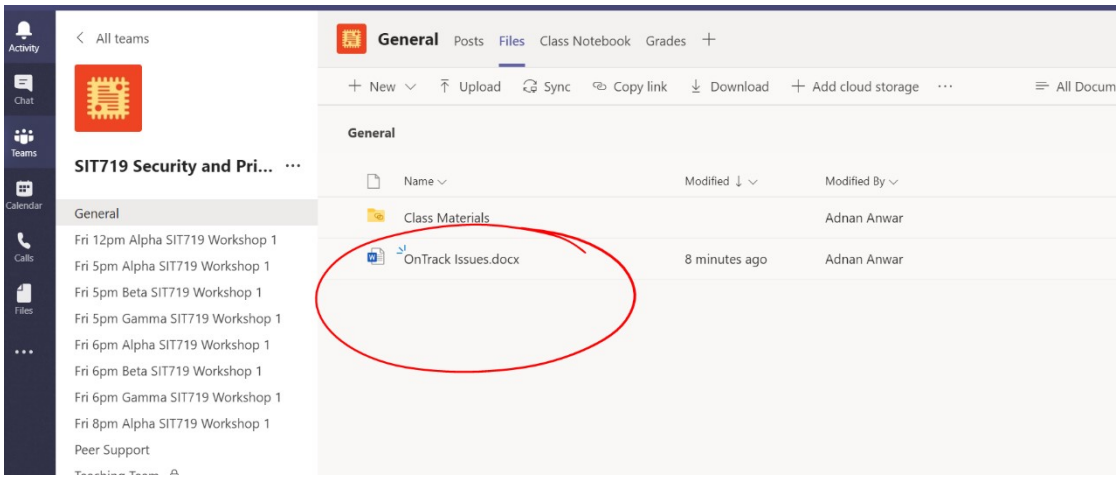
This method helps students create a portfolio that highlights their skills and abilities. It encourages learning by doing, which is useful for real-world applications and future job opportunities.

Section 2

Q5. Read the following comments.

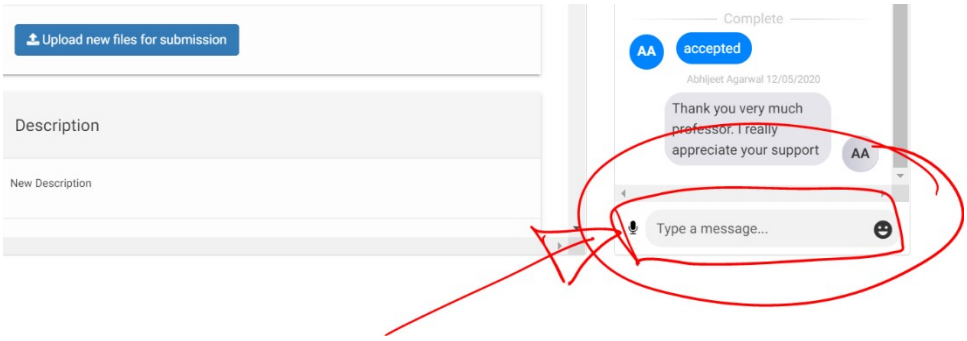
Comment 1: OnTrack Issue

This unit uses onTrack system. Therefore, you need to submit tasks using OnTrack (if not mentioned something else within the tasks, e.g, code may need to be submitted using CloudDeakin, it will be written in the task document clearly if so). You need to upload PDF document files during a regular submission using OnTrack. Please ensure that the PDF has no error or corrupted. If you find an OnTrack error, report it in the OnTrack Issues.docx" file under the file tab of MS Teams. We will try to resolve if that is a genuine case and related to OnTarck Platform. We recommend reporting in that file so that it will be recorded for everyone. If it is because of your own pdf compilation, your internet, software or laptop issue, we will not be able to help you.



Comment 2: Task discussion

Any question or concern should be discussed during the in person or online "workshop/practical lab" sessions. It is the recommended way. If you cannot join, you may ask the tutor through your OnTrack discussion box (shown below) or post into your MS Teams channel. It may happen that the answer of your question is known to your peers. You are suggested to join the seminars and/ workshops to clarify your queries.



Comment 3: Extension Request

We have already set the deadlines and students are aware of the due date of the tasks beforehand. Therefore, for any contingency or future events, students can plan ahead. If you need to apply for more than 1 weeks of extension, then you need to be detailed and clear about your supporting documents and need to follow Deakin's guideline (in the below link). https://www.deakin.edu.au/students/faculties/sebe/assignment-extensions

Comment 4: Grading/Marking

The tutors/markers are responsible to provide you feedback and grades on your tasks. D/HD tasks have a rubric. The marking team will provide you feedback based on the rubric.

Comment 5: Practical Notebook

We have provided you with colab notebook files for practicals/workshops.

Comment 6: Recordings for online class (seminars) and workshops (practicals)

The online class and online practical will be recorded. Available after the live session through MS Teams Channels.

Comment 7: Please keep a back up copy of your onTrack tasks Please keep a back up copy of your onTrack tasks.

Comment 8: Referencing Style

Any **standard referencing style is accepted**. However, IEEE style is preferable..https://guides.lib.monash.edu/citing-referencing/ieee

Comment 9: Update "Target Grade" in the OnTrack System

In this portfolio unit, you must set a "target grade" (discussed in the class, see the video if you have missed). To set up a target, you must consider your capability and your plan towards achieving the ULOs. Please set a realistic target that you can achieve. This target is for your reference only and you can change/modify the target anytime.

Comment 10: Learning Material

This is a portfolio based unit where students learn gradually over the weeks and finally submit a portfolio by compiling the tasks that they complete each week. Therefore, learning is completely based on OnTrack tasks.

Question: Are you okay with the above discussion/comments in Q5?

Answer: Yes