SYDE660 – Spring 2022.
Individual Contributions & Growth.

Due: Sunday, July 17 by 11:59 pm E.T. to LEARN Dropbox.

This course is centred around a team design project. Within this team, it is important that everyone makes meaningful contributions to the design project throughout the term and achieves their own goals regarding improving their own design and technical skills.

Completing this deliverable consists of answering the questions on the last page. It is expected that the length of this submission should be between two and three pages. There is a hard limit of four pages.

With regards to meaningful individual contributions, you are expected to clearly articulate how you have contributed to your team's design project work. It is okay if you worked with other members of your team with respect to your stated contributions. Make sure you are honest when describing your contributions, including stating where and how contributions were collaborative. The stated contribution areas will be the focus of at least one individually targeted question during the final project presentation.

With regards to achieving individual goals, questions three to five follow up on the goals you set yourself earlier in the term. You should be able to articulate whether you met these goals, how well you feel you met them, and any issues you experienced as the term progressed that prevented you from meeting your goals.

The individual contributions and plan deliverable must be submitted in PDF format to LEARN Dropbox by Sunday, July 17 by 11:59 pm E.T. to LEARN Dropbox.

Rubric.

0 – Missing. No submission.

1 – Marginal. While some contributions have been made, they are minimal and do not meet the expectations for this course. Contribution descriptions are vague, generic, and show little understanding of the specific design project undertaken by the team. Unclear how specialization was represented in the design project in a meaningful way. Description of how personal learning was realized is vague. Personal learning does not meet expectations for this course.

2 – Needs Work. Either contributions or achievement of learning plan, but not both, are marginal. Adequate description of how specialization will be represented in the design project in a meaningful way.

3 – Satisfactory. Contributions are reasonable and meet expectations for this course. Contributions are described in a mostly clear way that has some level of specificity to the selected design project. Adequate description of how specialization was represented in the design project in a meaningful way. Description of how plan for personal learning was realized with some examples. Personal learning meets expectations for this course.

4 – Good. It is clear that this individual has made reasonable contributions to the team's design project. Contributions are clearly described and specific to the selected design project. Clear description of how specialization was represented in the design project in a meaningful way. Clear description of how the plan for personal learning was realized supported by specific examples. Personal learning meets expectations for this course.

5 – Excellent. It is clear that this individual has made strong contributions to the team's design project. Contributions are clear, concise, design project-specific and show a strong understanding of the overall design project. Convincing description of how specialization was represented in the design project in a meaningful way. Clear, strong description of how the plan for personal learning was realized supported by persuasive, specific examples. Personal learning meets expectations for this course.

Note 1: If the answer to Q3 regarding incorporating your specialization into the design project is at a marginal level, the deliverable will receive a grade of 1 – Marginal and a follow-up meeting with Professor Howcroft will be scheduled. As stated in the course outline, students enrolled in a specialization version of the course must have a major focus of their design project in the specialization field.

Note 2: If you are enrolled in SYDE660 without a specialization (i.e., not SYDE660A-E), an answer of 'Not Applicable' is appropriate to Q3. The rubric comments related to specialization will then not be considered in the grading of your submission.

Student Name and Number: Wenhan Liu - 20729523

Design Team Name: Team 7

Q1. Describe the contributions you have made towards your design team's project since the previous statement of individual contributions.

- **Implemented a VGG model with softmax as final layer**
- **Implemented a CNN model with softmax as final layer**
- **Completed the Introduction of final report**
- **Completed the Project Scope and Objectives of final report**
- **Helped Completed Part of the Designed Solutions part**
- **Completed the Introduction, Project Scope, Project Objectives and Conclusion part of the Final presentation.**

Q2. Explain how this contribution supported the team's design project and prepared the team for the final project report and presentation.

By implementing these two models, I have provided more options for our team to choose the final product from. And the performance of both these models were already above our initial expectation of the models. I also completed part of the final report as well as the final presentation, so we can have our final deliverables.

Q3. How was your specialization incorporated into the design project?*

As my specialization is AI and ML, I can use corresponding knowledge and information to develop the two models for detection, and both the models were made up of neural network, and their hyperparameters were tuned in order for them to have even better performance, and all this knowledge can be contained as AI and ML.

Q4. How did you develop your design skills this term? How well did you meet the goals you set yourself regarding design skills? Did you experience any issues meeting your goals?

I have went online to search more information and examples about the design skills I wanted to develop, and for this project, I wanted to develop a storyboard, I have went through many examples of it and I came up with a complete storyboard. And I think I did rather well on completing the storyboard as it can it the reader a clear concept and perspective of what this project is about. I think any issues I encountered were solved with online examples and information.

Q5. How did you develop your technical skills this term? How well did you meet the goals you set yourself regarding technical skills? Did you experience any issues meeting your goals?

As I planned to work on technical skills such as developing neural networks, I think I completed the goals really well. I implemented the VGG model from tensorflow with few modifications, and I implemented a self-designed CNN which end up having slightly faster processing time and similar accuracy as the VGG model. The only issues I think I encountered were the hyperparameters, I had to spend a lot of time on finding the hyperparameters that can allow the model to have good performance.

Q6. Is there anything else you want me to know? Are you experiencing team dynamic issues? Other issues?

Our team worked together on this project, each member were able to make meaningful suggestions

and we worked together on making this project successful.

*If you are enrolled in SYDE660 without a specialization (i.e., not SYDE660A-E), answer 'Not Applicable' to this question.