COMP 4983: AIML Case Studies and Lecture Presentation Mark: /100

[Due: March 20, 2020 @1730
March 25, 2020 by 1430
April 1, 2020 @0830
and April 8, 2020 @1130
Assignment Submission Folders]

Name:
BCIT ID:
Lab Set: 3M

Instructions:

Over the next few weeks, you will explore different applications of artificial intelligence and machine learning (AIML) in various domains with your groupmates through a number of in-depth case studies (technical papers). The case studies reflect both classic as well as current trends in the industry. You will, individually, read all the technical papers, and as a group

- **indicate paper preferences to select a paper for further in-depth study**
- **present a 25-min lecture to teach the class the concepts and material of the (selected/assigned) paper**

Part 1: Group Ground Rules Contract

[5 marks] In this part of the lab, you will meet with your assigned groupmates for this course. Your $group\ number = \left\lceil \frac{classlist\ record\ number}{4} \right\rceil$**. You will, as a group, begin to establish the group ground rules contract. Submit the completed group ground rules contract, one per group, using the filename *ggr_contract_groupnumber.doc*. You may use the form from COMP3800/COMP4800 as a template which can be downloaded for use in this course from BCIT Learning Hub (Content | Project Material | Case Studies).**

Deliverable:

All work submitted is subject to the standards of conduct as specified in BCIT Policy 5104. Late submissions will not be accepted.

[March 20, 2020 @1730] Submit your signed and completed group ground rules contract, one per group, in *ggr_contract_groupnumber.doc* to BCIT Learning Hub (Case Studies Submission | Group Ground Rules Contract).

Part 2: Paper Selection

[5 marks] You shall, individually, read all the technical papers which reflect both classic and current practical applications of AIML. The technical papers, *AIMLCaseStudies.zip*, can be downloaded for use in this course from BCIT Learning Hub (Content | Project Material | Case Studies). Take note that these papers shall also serve as technical writing examples for all future project reports.

After each member has read all the papers, you will, as a group, submit your paper selection preferences to accomplish Part 3 as shown below in *paperselection_groupnumber.txt*:

Paper Selection #1: <Paper Title #1>
Paper Selection #2: <Paper Title #2>
…
…
… (in order of preference)

Paper assignment rules:

1. **Each group must indicate their preferences for all papers. Any paper(s) not listed by a group will still be considered for assignment, but the group's preference will not be taken into consideration.**
2. **There will be at most two (2) groups assigned to each paper. The assignment will be based on the submission time-stamp on BCIT Learning Hub on a first-come, first-serve basis. In the event of an identical time-stamp, the lower group number will be used to break the tie. Only one submission is allowed per group.**

   The submission folder will be available for uploading starting at March 25, 2020 @0600 and closing at March 25, 2020 @1430.

   The assigned paper for each group will be posted on BCIT Learning Hub by no later than March 26, 2020 @2359.

Deliverable:

All work submitted is subject to the standards of conduct as specified in BCIT Policy 5104. Late submissions will not be accepted.

[March 25, 2020 by 1430] Submit, one per group, using the filename *paperselection_groupnumber.txt* to BCIT Learning Hub (Case Studies Submission | Case Studies Selection).

Part 3: Lecture Presentation

[90 marks] After your group has been assigned a paper, you will, as a group, strive to understand the paper to the best of your ability. This may require researching and reading additional papers on the topic, learning the techniques used in the paper(s), reading the references therein, implementing the algorithms/models, etc. You are required to implement the algorithms/models (as described or on a reduced scale with an abstracted dataset) to provide insight.

The goal is to achieve an adequate depth of understanding of the paper to be able to teach (not just share) the material to the class in the form of a 25-min lecture presentation on April 8, 2020, using a slide deck. Your lecture presentation shall include, at a minimum, the following:

1) **[10 marks] how machine learning (and the techniques) are applied in the domain area you are presenting on**
2) **[20 marks] explain in detail (as best as you can) the technique used in the paper - if multiple techniques were used, you should present the main technique in detail and compare the other technique(s) relatively**
3) **[30 marks] demonstrate/illustrate the technique used**
4) **[10 marks] discuss insights gained**

There are no restrictions on the material preparation, i.e., you may use any open-source/open-access library packages, machine learning frameworks, figures, etc., for preparation of your slide deck, lecture presentation and demonstration. However, you must include a citation in your presentation listing all external resources.

Notes:

1. **All students must participate in the 25-min lecture presentation [AV setup (~1 min), presentation time (~19 mins) and Q&A/discussion (~5 mins)].**
2. **The lecture presentation will be graded by faculty and peer-evaluated based on content, clarity, organization and delivery quality.**

Deliverables:

All work submitted is subject to the standards of conduct as specified in BCIT Policy 5104. Late submissions will not be accepted.

[April 1, 2020 @0830]

1. **[5 marks] Submit, one per group, using the filename *draft_slidedeck_groupnumber.pptx* to BCIT Learning Hub (Case Studies Submission | Case Studies Draft Presentation). If the material for a slide is incomplete in this draft, include an outline for that slide as well as the name of the primary group member responsible for completing the slide.**
2. **[5 marks] All supplemental files used in the material preparation/presentation, including figures, source code and executable with detailed instructions shall be submitted in *draft_supplementalfiles_groupnumber.zip*.**

[April 8, 2020 @1130]

1. **[5 marks] Submit, one per group, the slide deck using the filename *slidedeck_groupnumber.pptx* to BCIT Learning Hub (Case Studies Submission | Case Studies Presentation).**
2. **[5 marks] All other supplemental files used in the material preparation/presentation, including figures, source code and executable with detailed instructions shall be submitted in *supplementalfiles_groupnumber.zip*.**

Appendix:

Classlist

Record Number	Student Name
1	Bolinao, Philip Daniel (Philip)
2	Cheung, Calvin K. (Calvin)
3	Chung, Vicky (Vicky)
4	DeLisle, Emily
5	Gill, Pritpal (Paul)
6	Gilpin, John R.
7	Iglesias, Alberto (Alberto)
8	Jaskamal Singh, -
9	Kim, Jihyo (Jihyo)
10	Lin, Hung Yu (Angus)
11	Lu, Yi (Louis)
12	Parekh, Dhruv S.
13	Pike, James N.
14	Ren, Demiao (Damon)
15	Southgate, Ciara
16	Vu, Phuc H. (Robert)
17	Wei, JR Shiuan (Jason)
18	Wilson, Spencer
19	Yun, Sang Wook (Sangwook)
20	Zhang, Lin Cheng (Bryan)