**Chengdu University of Technology Oxford Brookes College**

**Project Module (CHC 6096)**

**Weekly Report Shee**

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| DATE: | 2022/12/5-2022/12/11 |
| Briefly list all the main tasks you accomplished in the week.  Find that I need to learn deep learning in PyTorch so I find a course on youtube and learned that.  I finish a simple DCN model by myself.  I define a neural network model called Deep & Cross Network (DCN). The model consists of three types of layers: embedding, cross, and deep. The input\_dim parameter specifies the size of the input layer, which is 10 in this case. The embedding\_dim parameter specifies the size of the embedding layer, which is 20 in this case. The cross\_layer\_num parameter specifies the number of cross layers, which is 2 in this case. The deep\_layer\_num parameter specifies the number of deep layers, which is 2 in this case.  The embedding layer is a fully connected linear layer that maps the input features to the embedding space. The cross layer consists of several cross layers, each of which takes in two input vectors (x0 and xi) and outputs an interaction term between them. The deep layer is a sequence of fully connected linear layers with ReLU activation. Finally, the output layer is a fully connected linear layer that maps the concatenation of the cross and deep layers' output to the output space.  The model can be used for classification tasks by applying a sigmoid activation function to the output of the output layer and interpreting the output as a probability of belonging to a certain class. | |
| Briefly state all the challenges you encountered in the week.  Some function can not find out    And it takes my time to understand the meaning of emedding | |
| Briefly Plan out the agenda for next week.  Continue work on the model, and this time use my dataset  Starting to write the progress report. | |
| SUPERVISOR SIGNATURE: |  |