

Model Building Test

Description

For the following problem please write and document a complete solution. You will not be expected to execute them in the interview, however they must be well documented, your solution and documentation should be decided if you will be qualified for the follow-up interviews. Provide a one page explanation of your architectural/algorithms choices.

Write code to accomplish the following steps. The language(s) and package(s) you use to accomplish this are your choice: (iPython markdown is recommended)

1. Read dataset from given csv file
2. Data pre-processing
3. Build a **deep learning model**
4. Cross-validation to calculate model accuracy
5. Hyper parameters tuning
6. Get prediction from testing data(2 output columns, ID and predicted Node Minutes)

Dataset explanation

Input dataset name is '*Node_Minutes_Prediction_data.csv*', which is a pipe separated csv file includes column names.

The dataset has 3 different data type for columns, Number, String, and TimeStamp.

Column "ID" is the Primary key, which has unique value.

Column "Node_Minutes" is the target column. Your model is aim to predict this value.

Confidentiality

All knowledge and information, not already available to the public, which you acquire, have acquired, or will acquire in the course of the interview process with the Company with respect to the Company's business, work methods, or pending regulatory matters, or other Company matters that are treated by the Company as confidential, shall be regarded by you as trade secrets, whether or not they are classifiable legally as trade secrets, and shall be treated by you as strictly confidential. Such knowledge and information shall not either directly or indirectly be used, disclosed, or made accessible to anyone by you for any purpose, except in the ordinary course of the Company's business under circumstances in which you are authorized to use or disclose such information. No disclosures of such confidential information shall be made outside of those you are authorized to make in the regular and ordinary course of your duties unless and until you receive prior written permission of the Board of Directors of the Company to make such disclosure.