E-code

ECG Dataset.zip contains ECG datasets.

Derivatives 3 datasets.zip contains 3 datasets derived from the ECG dataset, ECG-CG, ECG-mini, ECG-clone.

Source Code contains the source code of E\_code and Time\_Predictor.

To use the E\_code source code extremely fast: Download the Bert-tiny model weights file pytorch\_model.bin from huggface and copy it to the Bert\_tiny\_Opened\_expert\_group\_layer\_Weights, Bert\_tiny\_Weights, Weights\_Expert\_Group \_Integration\_Layer in three folders. Extract the ECG dataset to the E\_code folder and change the file name to ECG. Run the train.py file. Implementation Train the model -> predict the generated code -> perform IO test on the generated code.

Set Command\_line\_parameters.task = 0 to train the E-code model.

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and set Command\_line\_parameters.RELU = 1 to train a comparison experiment using the RELU activation function.

Set Command\_line\_parameters.task = 0, and set Command\_line\_parameters.

and set Command\_line\_parameters. heads = 8 to train a comparison experiment using 8 heads.

Set Command\_line\_parameters.task = 1 to train the No-expert-E-code model.

Set Command\_line\_parameters.task = 2 to train the GPT model.

Extremely fast use of Time\_Predictor source code: Extract the ECG dataset to the E\_code folder and change the file name to ECG. Run the train.py file to train the model.

Put the code to be predicted into Code\_to\_be\_predicted and run Prediction\_generation\_code to automatically predict the code runtime.