**PE07: Programming Exercise**

**Instruction**

**NTM in SageMaker**

Closely follow the textbook chapter 9 and Lecture 07.pptx to implement NTM in SageMaker:

* PE07-1 Data
  + Follow textbook 304 to get Enron emails
    - 39.861 emails and 28101 unique words
    - We will work with a subset of these emails – 3986 emails and 17524 unique words
* PE07-2 Implementation in SageMaker
  + Follow textbook page 311 step 1 to 13
* PE07-3 Deploy the trained NTM model and running the inference
  + Follow textbook page 317 step 1 to 5, and plot the topics

**Your task for PE07 is to:**

1. Complete above task

**Please make sure you remove all the running resources after finishing the task. Note that you will need to specifically shutdown the deployed inference.**

**HINT**:

* Should be a light PE so that you can focus on team project progress report
* Feel free to follow the textbook’s GitHub codes if needed: <https://github.com/PacktPublishing/Hands-On-Artificial-Intelligence-on-Amazon-Web-Services/tree/master/Chapter09>
* Feel free to follow [this step-by-step video](https://cityuseattle.sharepoint.com/teams/AI620ONEmergicTopicsinArtificialIntelligence-Fall2024/_layouts/15/stream.aspx?id=%2Fteams%2FAI620ONEmergicTopicsinArtificialIntelligence%2DFall2024%2FShared%20Documents%2FModule%2007%2FRecordings%2FMeeting%20in%20%5FModule%2007%5F%2D20241110%5F213334%2DMeeting%20Recording%2Emp4&referrer=StreamWebApp%2EWeb&referrerScenario=AddressBarCopied%2Eview%2Ee9b2dbd9%2D9ba5%2D4191%2D87da%2D52c02771dce2) to complete this PE

**Submit the items below to the PE submission page:**

* Please provide screenshots after completing task1 PE07-2, PE07-3
* Please provide around 100 words of overall feelings completing this whole PE.
  + Make sure the PE module number and your name are written on the file name, e.g., "*PE07\_Name.docx").*