Cairo University

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Machine Learning Project Proposal

Team 10

Team members

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1- Gender Classification

- **Problem definition and motivation**

  Automatic gender classification currently is receiving increasing attention as genders carry rich information related to male and female social activities. We will classify the gender of the person based on some features presented in the dataset.

- **Evaluation metrics**
  - F score
  - Precession
  - Recall
  - Accuracy
- **Dataset and references**

  Dataset:

  - https://www.kaggle.com/datasets/elakiricoder/gender-classification-dataset?fbclid=IwAR0_aJ8aRejwgf34fPktJnWjTpjC6ySkZhBqihxg8Oq0qcQjVhtRya2XFBQ

  Papers:

  - https://www.researchgate.net/publication/342115800_Human_Gender_Classification_using_Machine_Learning
  - https://link.springer.com/content/pdf/10.1007/978-3-642-30157-5_6.pdf
  - https://gvpress.com/journals/IJBSBT/vol5_no4/24.pdf

2- Bike Sharing Demand

- **Problem definition and motivation**

  Recently, renting bikes has been widely spread because of how easy the process became after Bike sharing systems were introduced. Through these systems, user is able to easily rent a bike from a particular position and return back at another position. This results in increase in the average number of rented bikes.

  The problem is to predict the total count of bikes rented during each hour, using only information available prior to the rental period.

- **Evaluation metrics**
  - the Root Mean Squared Logarithmic Error (RMSLE)
  - root mean squared error (RMSE)
- **Dataset and references**

  Dataset:

  - https://www.kaggle.com/competitions/bike-sharing-demand/data

  References:

  - https://www.kaggle.com/competitions/csce5300-competition/overview
  - https://www.researchgate.net/publication/259382357_Bike-Sharing_Dataset
  - http://arno.uvt.nl/show.cgi?fid=156914
  - https://www.researchgate.net/publication/348974351_Machine_Learning_Approaches_to_Bike-Sharing_Systems_A_Systematic_Literature_Review