Nicholas Ogbonna

November/13/2022

Dr. Barber

Data606: Data Science Capstone

Personal Contribution Write-up

To Grader,

Good day, my name is Nicholas Ogbonna. I am the leader of Nicholas Ogbonna’s Baltimore Arrest Data machine learning capstone project group. The following are my personal contributions to the capstone project.

* Development of the business question
* Contributions to Data Acquisition
  + Downloaded and confirmed legality of the dataset
* Contribution to Data Access
  + Figured out the most optimal way to import dataset
* Contribution to EDA
  + modified the data types to better represent the values in each of the columns
  + Removed redundant/unneeded features
  + Converted dataframe from pandas to pyspark and handled any bugs that arose over the transition
  + Modified the datetime feature into the more useful “date” and “time” features
  + Dealt with the NA values of all the important features
* Contribution to EDA Analysis
  + Performed the research and application of the multicollinearity tests
  + Performed the research and application of the chi-square test
* Contribution to Data Cleaning
  + Handled the NA values of all the important features
* Contribution to Data Preprocessing
  + Created the initial training test split
  + Created initial pipeline for processing
* Contribution to Data Modeling
  + Initial and grid search for the Logistic, decision trees, ensemble, and ada boost
* Contribution to Group planning and organization
  + Created deadlines for various milestones of the project
  + Assigned tasks to the various members of the group
    - Later renounced those tasks to allow for the group to freely modify whatever they needed to modify for the betterment of the project itself

Please note that what was listed here is a surface level look into our contributions to the project as the group dynamic would fluctuate over the last few months as group members would work on various sections of the project regardless of if it was originally planned or not. Thank you for your time and have a blessed day.

Regards,

Nicholas Ogbonna