**DA450-Final Project**

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**Team members:**

**Ahmed M Jarrah**

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**Completed tasks:**

- Select, get, and discover the dataset. (We sent the dataset description with its link before via email)

- Writing 80% of the code while adhering to the project guidance.

**The Link to the source code:** https://colab.research.google.com/drive/1RY6NSZw9bzNHXpNj2G0Tn\_b\_jG2D4f7U?usp=sharing

- Regarding the report, we have written an introduction:

There is no doubt that computers have huge capabilities in processing data and complex operations, and with the emergence of AI, the computer began to understand the data and operations it performs, whether images, numbers, text, or voices.

But have you ever wondered if a computer recognizes the gender of the person it is dealing with?

Before answering the question, remember that a computer does not understand the inputs as they are, but rather converts them into a digital language to be able to understand and process them, well, after diving into the science of phonetics, it was noticed that certain characteristics distinguish the male voice from the female, and to answer the question mentioned above, these characteristics were utilized and feed it to specific ANNs to enable the computer to classify and distinguish voices for the marketing, social, and security benefits to be gained and enhanced as well.

In this project, you will know how to use related artificial neural networks to enable a computer to correctly classify the gender of a speaker.

**Challenges that we faced:**

- The timelessness due to the load we have, including preparing a project for each course we registered on and the intensive assignments and quizzes.

- Our lack of knowledge of the science of the voice, but we are searching and understanding all the features included and knowing their role and impact on our desired target.

**Remaining tasks:**

- Completing the code to be fully commented, to improve its readability and to be understandable, adding more evaluation metrics such as f1-score, precision, and recall, and trying to increase our testing result as well as the training results.

- Completing the entire report to be comprehensive and to cope with the project report requirements. Include graphs, screens, and a clear interpretation of our results.

- Recording a video to showcase our findings and methodology.

- Achieve every duty that the project requires.

**Appendices:**

