Assignment: S3W13A1 - Stage 3 Deliverables

40 Points Possible

9/22/2024

Attempt 1

In Progress

NEXT UP: Submit Assignment

Add Comment

Unlimited Attempts Allowed

Details

Stage 3 - Statement of Deliverables

Stage 3 focuses on developing an Artificial Neural Networks (ANN) model to predict customer retention and churn. Additionally, you are required to evaluate the model's performance and present their findings in a report.

Stage 3 Deliverables: Predictive Modeling

3-1: Predictive Modeling Deliverables:

1. Defined Architecture of ANN Model:

- Specify the architecture of the ANN model, including the input, hidden, and output layers optimised for predictive performance.

2. Trained ANN Model on Provided Dataset:

- Train the ANN model using the provided dataset, leveraging robust optimisation algorithms to enhance model convergence and generalisation.

3. Predicted Customer Churn and Evaluated Model Performance:

- Utilise the trained ANN model to predict customer churn based on critical customer attributes and behaviours.

- Evaluate the model's predictive performance by analysing the accuracy and robustness of churn predictions against the ground truth.

3-2: Final Report:

1. Summary of Key Findings:

- Provide a summary of key findings from customer segmentation and churn prediction analysis conducted using the ANN model.

2. Identification of Factors Contributing to Churn and Retention:

- Identify and analyse factors contributing to customer churn and retention based on the ANN model's predictions.

3. Recommendations for Targeted Retention Strategies:

- Provide recommendations for implementing targeted retention strategies based on the results of the analysis.

4. Documentation of Limitations and Proposed Solutions:

- Document any limitations and challenges encountered during the project and propose potential solutions or mitigations.

5. Video Demonstration:

- Create a video (10 to 15 minutes long) demonstrating the development and evaluation of the ANN model for predicting customer churn.
- Walk through the steps involved in defining the architecture of the ANN model, training the model on the provided dataset, and evaluating its performance.
- Provide visualisations of key findings and insights from the analysis, such as churn predictions and factors contributing to churn and retention.
- Explain the recommendations for targeted retention strategies and any limitations encountered during the project.

Submission Instructions

You need to continue using the existing repository created for the project submission.

1. Predictive Modeling Deliverables:

- Create a folder named "Predictive_Modeling" to store all predictive modeling deliverables.

- Within the "Predictive_Modeling" folder, include:

a. Defined Architecture of ANN Model:

- Provide a document (e.g., PDF or Word) specifying the architecture of the ANN model, including details of input, hidden, and output layers optimised for predictive performance.

b. Trained ANN Model on Provided Dataset:

- Include the trained ANN model file along with relevant code or scripts used for training.

3. Final Report:

- Create a document named "Final_Report" to submit via the LMS. Within the "Final_Report" folder, include:

a. Summary of Key Findings:

- Provide a document summarising the key findings from customer segmentation and churn prediction analysis conducted using the ANN model.

b. Identification of Factors Contributing to Churn and Retention:

- Include an analysis document identifying and analysing factors contributing to customer churn and retention based on the ANN model's predictions.

c. Recommendations for Targeted Retention Strategies:

- Submit a document outlining recommendations for implementing targeted retention strategies based on the analysis results.

d. Documentation of Limitations and Proposed Solutions:

- Document any limitations, challenges, and proposed solutions encountered during the project.

4. Video Demonstration:

- Upload the video demonstration (10 to 15 minutes long) showcasing the development and evaluation of the ANN model.

- Ensure the video covers the defined architecture, model training, evaluation of performance, key findings, insights, recommendations, and any encountered limitations or challenges.

Submission Process:

- Resubmit the link to the created GitHub/GitLab (or any other platform) repository as the primary project submission.
- Submit the Final Report document.
- Upload the video demonstration file.

Note:

- To submit your Stage 2 Deliverables, click on the 'Submit Assignment' button below.
- Click on 'New Attempt' to make multiple submissions for different submission types.
- The 'Project Manager' is responsible for submitting one copy of all the above documents. Individual members are NOT to submit any team documents at any time.

View Rubric

Stage 3 Deliverables (WD) Rubric

Criteria	Ratings		Pts
Predictive Modeling Deliverables view longer description	**15 pts** **Full Marks** All elements as defined in the Assignment Instructions must be included to get full marks	**0 pts** **No Marks** No submission	/ 15 pts
Final Report view longer description	**15 pts** **Full Marks** All elements as defined in the Assignment Instructions must be included to get full marks	**0 pts** **No Marks** No Submission	/ 15 pts
Video Demonstration view longer description	**10 pts** **Full Marks** All elements as defined in the Assignment Instructions must be included to get full marks	**0 pts** **No Marks** No Submission	/ 10 pts
			Total Points: 0

Keep in mind, this submission will count for everyone in your Project Groups group.

Choose a submission type.

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