DATAQUEST

Sepsis Early Detection Challenge

Sepsis Overview

Sepsis is a life-threatening medical condition that occurs when the body's response to an infection triggers widespread inflammation, potentially leading to organ failure and even death. It is a major global health concern, responsible for millions of deaths annually. Sepsis can arise from infections such as pneumonia, urinary tract infections, or bloodstream infections, and its early detection is crucial for timely intervention. If not treated promptly, sepsis can progress to septic shock, a critical state characterized by dangerously low blood pressure and multi-organ dysfunction.

Given its high mortality rate and the complexity of its diagnosis, leveraging AI and machine learning can significantly aid healthcare professionals in identifying at-risk patients before their condition worsens.

Objective

Participants are required to develop a predictive model that accurately identifies patients at risk of developing sepsis. The model should be optimized to maximize the F1 Score, which balances precision and recall, ensuring both sensitivity and specificity in detecting sepsis cases.

Evaluation Criteria

- **Leaderboard Metric:** F1 Score (higher is better)
- **Tie-Breaker:** If multiple participants achieve the same F1 Score, the earliest submission will be ranked higher.
- **Submission Format:** A CSV file containing only the predicted labels.

Dataset Access

https://drive.google.com/drive/folders/1S_-CNAHyvCnxzQ-4P5T4q_MenlSnj0b4?usp=drive_link

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Dataset Details

The dataset consists of ICU patient records with various health indicators relevant to the prediction task. It includes numerical and categorical features that participants can utilize to develop machine learning models for accurate predictions.

Submission Guidelines

- Submit a CSV file containing only the predicted labels with headings (Sepssis) for the test set.

- Ensure that your submission follows the provided format to avoid errors.
- The final model should be reproducible, and teams may be asked to submit their code for verification.

Timeline

- Submission Deadline: March 25, 4:00 PM (strict deadline)
- Results Announcement: Post evaluation, the top 40% of teams will proceed to Round 2.

Rules & Restrictions

- Use only the official dataset provided. External datasets or pre-trained models are strictly prohibited.
- All code must be original and submitted by the team. Plagiarism or unethical behaviour will result in immediate disqualification.
- Collaboration outside your team is not permitted.
- One team member must remain present at all times if going for break during the competition.
- Respect submission deadlines. Late submissions will not be considered under any circumstances.
- Adhere to ethical AI practices. Ensure fairness, privacy, and data security in your model.

Support & Queries

For any technical issues or competition-related queries, please reach out to the organizing team immediately.

Best of luck to all participants! We look forward to seeing your innovative solutions.