SynergyX 2024: National Symposium on Industry-Academia Collaboration for ICT-Enabled Bangladesh

Datathon Competition: Full Guidelines and Rule Book

We are excited to announce SynergyX 2024, an event aimed at fostering collaboration between academia and industry. As part of this symposium, we are organizing a Datathon Competition open to universities nationwide. The competition will consist of three key stages, providing participants with opportunities to enhance their data science, machine learning, and AI skills.

Datathon Overview

The competition will unfold in three key stages:

1. Grooming Sessions: Teams will participate in 5 interactive grooming sessions, covering essential topics in data science, including Data Cleaning, Data Engineering, Model Training, Natural Language Processing (NLP), and Computer Vision.

2. Preliminary Round: After the grooming sessions, teams will engage in a virtual data challenge to test their skills and qualify for the final.

3. Final Onsite Contest: The top 10 teams from the preliminary round will compete in an onsite final, taking place over two days on November 9 and 10 at AI-Lab.

Step 1: Team Formation and Grooming Sessions

Team Formation

1. Team Registration: Teams must be formed before the grooming sessions begin. Each team will consist of 3 members. Members may be from the same or different universities.

2. Registration Fee: The registration fee for each team is **1,500 BDT**, covering both the grooming sessions and competition stages.

Grooming Session Structure

Total Sessions: 5 interactive grooming sessions designed to equip teams with the skills needed for the Datathon.

Session Outline:

Data Cleaning
Feature Engineering
Model Training and Evaluation Criteria

Natural Language Processing (NLP)
Computer Vision

Why Attend the Grooming Sessions?

1. **Hands-on Learning**: Gain practical experience with key data science topics, making complex concepts easier to understand.
2. **Expert Guidance**: Learn from experienced professionals who share valuable industry insights and best practices.
3. **Team Collaboration**: Connect with teammates to share ideas and strengthen your team's foundation for the competition.
4. **Inclusive for All Levels**: Open to everyone, these sessions benefit beginners and experienced participants alike, helping you build confidence and skills for the competition.

Step 2: Preliminary Round

Preliminary Contest Details

1. Challenge Format: After the grooming sessions, teams will participate in a virtual preliminary data challenge, serving as the first competitive stage.

2. Evaluation Criteria: Teams will be judged based on technical accuracy, problem-solving creativity, and collaboration.

3. Shortlisting: The 10 best teams will be shortlisted for the onsite contest based on their performance in the preliminary round.

Step 3: Onsite Final Contest

Final Contest Details

1. Onsite Event: **The top 10 teams will compete in an onsite final competition at AI-Lab on November 9 and 10.**

2. Advanced Challenges: The final contest will present more complex data challenges, requiring teams to utilize their skills from the grooming and preliminary rounds.

Judging Criteria

Teams will be evaluated based on the following:

1. **Technical Accuracy**: Assessment of how effectively the problem was addressed and solved.
2. **Innovation**: Evaluation of the uniqueness and creativity demonstrated in the solution.
3. **Teamwork**: Analysis of how well team members collaborated and communicated to achieve their goals.
4. **Presentation**: Clarity in introducing team roles, defining the problem, outlining objectives, detailing methodology, presenting results, and discussing data sources, algorithms, innovations, real-life applications, business value, and overall impact.

Rules and Guidelines

General Rules

1. Eligibility: Open to students from any university in Bangladesh.
2. Team Composition: Teams must have 3 members. Members can be from the same or different universities.
3. Grooming Sessions: Teams must register to qualify for the preliminary round, but attending the five grooming sessions is optional.

4. Commitment: Participants are expected to remain committed throughout the competition. The registration fee is non-refundable.

5. Submission: Teams will submit their solutions in both the preliminary and final rounds. Judging will be based on technical accuracy, creativity, and teamwork.

Contest Rules

Participants who cannot attend the session can still join the contest by first participating in the pre-selection round by paying the registration fee.

1. Pre-Selection : Those who participate in the grooming session, as well as those who do not, must all participate in the mandatory pre-selection round to be eligible for the final on-site contest.

2.Competition Format

- **Duration**: Typically **lasts 6 hours to 8(on November 9 and 10, 2024)**
- **Stages**:
    - **Problem Understanding**
    - **Model Development**
    - **Testing & Validation**
    - **Final Submission** (includes code, predictions, and Presentation)

3. Dataset and Tools

- **Dataset**: A specific dataset will be provided at the start. External datasets are allowed only if specified in the problem statement.
- **Tools**: Participants may use Python, TensorFlow, PyTorch, Scikit-learn, etc. Paid tools are not permitted unless provided by the organizers.

4. Team Composition

- Each team can have a **maximum of 3 members**. No changes to team composition are allowed once the competition starts.

5. Submission Requirements

- **Code**: Must be well-commented and include preprocessing, training, and evaluation steps.
- **README**: Should include clear instructions for running the code.
- **Output**: Must match the specified format (e.g., CSV, JSON).
- **Presentation**: Mandatory. Should explain the approach, performance metrics, and potential real-world applications.

6. Evaluation Criteria

- **Model Performance**: Evaluated based on accuracy, AUC, RMSE, etc.
- **Innovation**: Creative and novel approaches to solving the problem.
- **Scalability**: Ability of the solution to handle larger datasets or more complex scenarios.
- **Code Quality**: Readability and documentation quality.
- **Real-World Applicability**: Demonstrating practical applications for the solution.

7. Conduct and Collaboration

- All work must be original. No collaboration or external help is allowed outside of registered team members.
- Professional behavior is required at all times. Any violations may lead to disqualification.

8. Machine Allocation: **Each participant will bring their local machine for the on-site contest. Additionally, we will provide one GPU per team from our AI lab.**

Prizes and Recognition
1. Awards: Winning teams will receive certificates, trophies, and cash prizes.

- **1st Place: BDT 15,000**
- **2nd Place: BDT 10,000**

- **3rd Place: BDT 8,000**

2. Recognition: Exceptional teams may have the opportunity to present their solutions at SynergyX 2024, opening doors for internships or job opportunities with attending industry professionals.

Important Dates
1. Team Registration Deadline: [30 October]
2. Grooming Start Date: [17 October]
3. Preliminary Round: [ ]
4. Final Onsite Contest: November 9 and 10, 2024.

How to Register
For Team Registration:
1. Form a Team: Teams must consist of 3 members.
2. Register Online: Complete the online registration form and pay the **team registration fee of 1,500 BDT.**
3. Attend Grooming Sessions: All team members are required to attend the 5 grooming sessions.

We look forward to seeing your innovation and teamwork in the SynergyX 2024 Datathon Competition! Prepare to compete, collaborate, and excel in this data-driven event!

For more information, **please contact us at [Insert Contact Information].**

Registration Link: *https://forms.gle/iZhD4jK91j3JoEWi6*

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Gear up for success and be part of Bangladesh's data-driven future!