

## 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>  
[\*Datathon Registration Link\*](#))

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