

ROBO SOCCER-Whistle Mania!

Summary

"Whistle Mania!" at UIU CSE Fest 2025 will feature exciting 1v1 robo-soccer matches, where robots take on the role of players! This segment encourages creativity, teamwork, and problem-solving, allowing students to apply their knowledge in a fun and competitive environment.

To help our students succeed, grooming sessions will be held to support the teams from UIU. These sessions will focus on refining skills, developing strategies, and providing expert guidance, ensuring our students are fully prepared to shine in the "Whistle Mania!" competition.

Registration Procedure

- Registration Deadline: 15th December, 2024
- **Eligibility:** All undergraduate program students from public/private universities are eligible to compete!
- Fees: 2000 BDT per team
- <u>Team:</u> Teams of up to 5 members; each participant can only join one team of a segment, i.e. a participant cannot be in two teams that are competing in the same segment.

Rulebook

A. Bot Specifications

1. Bots must use wireless communication (e.g., RF, NRF, Bluetooth); wired control is prohibited. Teams are responsible for managing communication channels.

- Jamming devices are strictly prohibited and will result in immediate disqualification. This includes any RF disruptors or devices that intentionally interfere with other teams' communication signals.
- 3. Bots must have an onboard power supply of no more than 24V. External power sources are not allowed.
- 4. Bots must have a kill switch or emergency shutdown mechanism.

B. Key Dimensions

- 1. Length: Max 25 cm (including bracket).
- 2. Width: Max 25 cm.
- 3. Height: Max 20 cm.
- 4. Weight: Max 2.5 kg.
- 5. Brackets must be open-type and not enclose the ball. If the ball is gripped, the team will be disqualified.
- 6. Max Bracket Length: 12 cm.
- 7. Max Bracket Width: 6.5 cm.
- 8. Brackets must allow the ball to be visible at all times and must not have sharp edges.

C. Arena Specifications

- 1. Field Width: 5 feet.
- 2. Field Length: 9 feet.
- 3. A boundary wall of 5–10 inches in height will surround the field.
- 4. Centerline and goal areas will be marked clearly.

D. Game Format

- 1. All matches are knockout rounds between two teams; winners advance.
- 2. Matches last 6 minutes, divided into two halves of 3 minutes each, with a 2-minute break in between.
- 3. Timeouts may be allowed for bot repairs or issues at the discretion of the referee.
- 4. Bots can only be handled during breaks.
- 5. Opponents will be assigned randomly.

E. Scoring System

- 1. Each goal awards 100 points.
- 2. Each foul results in a 50-point deduction.
- 3. Teams have one free manual restart; subsequent restarts deduct 100 points each.
- 4. Teams are allowed a maximum of 2 manual restarts.

F. Match Rules (TBA)

G. Penalty Rules

- 1. For penalty shots, the ball is placed at center with no defenders allowed at the goal.
- 2. A team must push or shoot the ball beyond the centerline within 10 seconds of the whistle, or the shot is canceled.

H. Tie Breaker Rules (TBA)

Disqualification Criteria

- 1. Disrespectful conduct towards referees, judges, or opposing team members.
- 2. Violation of security or competition rules.
- 3. Failure to adhere to all specifications.
- 4. Use of any weapon or damaging equipment.
- 5. Failure to comply with technical specifications (e.g., unauthorized robot modifications during play).

Prize Money

The top three teams will receive the following prizes:

First Prize: 25,000 BDT
Second Prize: 15,000 BDT
Third Prize: 10,000 BDT

Objectives

Through this competition, participants will:

- 1. **Build Teamwork and Strategy Skills:** Working in teams to build soccer-playing robots fosters collaboration, strategic planning, and teamwork.
- 2. **Develop Technical Versatility:** Constructing bots for Robo Soccer allows participants to explore motor control, wireless communication, and power management, as they create designs capable of performing dynamic moves on the field.