

OSC x Reinforce Club Hackathon 2025 (Auraverse)

Hackathon Overview

*Join us for an exciting hackathon organized collaboratively by the **Open Source Club (OSC)** and **Reinforce Club!** This event will challenge participants to solve real-world problems involving data pipelines, dynamic schema generation, and intelligent storage systems.*

Important Dates

- **Problem Statement Release:** November 8, 2025
 - **Pre-Qualifying Round:** November 10, 2025
 - **Final Round:** November 15, 2025
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Hackathon Objectives

For Existing Members

- **Performance Evaluation:** All existing members of both OSC and Reinforce clubs will be tested through this hackathon
- **Members not meeting the required standards will be removed from their respective clubs**
- **This ensures only the most dedicated and skilled members continue**

For New Participants

- **Open to All:** The hackathon is open to everyone, regardless of club membership
 - **OSC Recruitment:** Outstanding participants will have the opportunity to join the OSC Club
 - **Note:** Reinforce Club will not be recruiting directly from this hackathon
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Problem Statements

Problem Statement 1: Dynamic ETL Pipeline for Unstructured Data

Challenge: Given unstructured scraped data that evolves over time, develop an ETL (Extract, Transform, Load) pipeline that can generate dynamic schemas on-the-fly.

Key Requirements:

- Handle completely unstructured input data
- Adapt to data that changes multiple times
- Generate schemas dynamically as data evolves
- Address the challenge of storing data when structure is unknown upfront

Use Case: This simulates real-world scenarios where data sources are unpredictable and constantly changing, making static schema definitions impractical.

Problem Statement 2: Intelligent Multi-Modal Storage System

Challenge: Design a smart storage system with a single frontend interface that intelligently processes and stores any type of data.

Key Requirements:

For Media Files (Images/Videos):

- Accept any media type through a unified frontend
- Automatically analyze and categorize content
- Place files with related existing media in appropriate directories
- Create new directories for unique content categories
- Organize subsequent related media into existing directories

For Structured Data (JSON Objects):

- Accept JSON objects through the same frontend
- Intelligently determine whether SQL or NoSQL is more appropriate
- Create the appropriate database entity automatically
- For multiple JSON objects: analyze structure and generate complete schema with proper relationships

Additional Considerations:

- System should accept optional comments/metadata to aid in schema generation
- Must handle both single and batch data inputs
- Should maintain consistency and optimize for query performance

Prizes

Position	Prize Money	A* Credits
1st Place	₹3,000	2 A* Credits
2nd Place	₹2,000	2 A* Credits
1 Year Winner (3rd Place)	₹1,000	2 A* Credits

Team Formation Rules

- **Team Size:** Exactly 3 members per team (no more, no less)
 - Participants are free to choose their own team members
 - Mix of existing members and new participants is allowed
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Pre-Qualifying Round (November 10, 2025)

Eligibility

- **Required:** All new participants (non-members of OSC and Reinforce clubs)
- **Exempt:** Existing members of OSC and Reinforce clubs automatically qualify for the final round

Submission Requirements

Teams must submit a comprehensive document containing:

1. **Architecture Design:** Complete system architecture diagram and explanation
2. **Workflow:** Step-by-step workflow of your solution
3. **Technology Justification:** Detailed explanation of technology choices

4. **Optimization Rationale:** Why your approach is the best solution for the given problem

Evaluation

- Core members from both OSC and Reinforce clubs will evaluate all submissions
 - Selected teams will advance to the final round alongside existing club members
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Final Round (November 15, 2025)

Format

- **Live Presentation:** Each team presents their implementation to the core members
- **Time Limit:** 3 minutes per team to explain the solution
- **Q&A Session:** Core members will ask questions about implementation details, design choices, and technical decisions

Evaluation Criteria

Each team will be evaluated by all core members present from both clubs. Assessment will be based on:

1. **Technical Implementation** (35%)
 - Code quality and architecture
 - Proper use of technologies
 - Scalability and performance
 - Error handling and edge cases
2. **Problem Understanding** (25%)
 - Clear understanding of the problem statement
 - Addressing all key requirements
 - Practical approach to real-world challenges
3. **Innovation & Creativity** (20%)
 - Novel approaches and unique solutions
 - Creative problem-solving
 - Efficient use of resources
4. **Presentation & Documentation** (10%)
 - Clarity of explanation
 - Quality of documentation
 - Ability to answer questions confidently

5. Completeness (10%)

- *Functional working prototype*
 - *All features implemented*
 - *Ready for demonstration*
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Important Notes

- *All submissions must be original work*
 - *Teams caught plagiarizing will be immediately disqualified*
 - ***All three team members will be evaluated together as a team; no individual evaluation will be held. If disqualified, all three participants will be disqualified together***
 - *Decisions made by core members are final*
 - *Participants must be present for both pre-qualifying (if applicable) and final rounds*
 - *Late submissions will not be accepted*
 - *If even one of the participants is not part of the existing club members the whole team will need to participate in pre-qualifying round*
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Contact & Support

For queries and clarifications, please reach out to:

OSC Club

- *Jenish Togadiya (President)*
- *Krish Jaiswal (Vice-President)*
- *Iyad Farooq / Arnav Gupta (Training Head)*
- *Sauhard Gupta (Project Manager)*

Reinforce Club

- *Priyam Gosh (President)*
 - *Sayed Zahur (Vice-President)*
 - *Eshita Yallawati (Training Head)*
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Good luck to all participants! May the best team win! 

Document prepared by OSC & Reinforce Club Core Team.