

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

<i>Position</i>	<i>Prize Money</i>	<i>A* Credits</i>
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 Yallowati (Training Head)*
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Good luck to all participants! May the best team win! 🚀

Document prepared by OSC & Reinforce Club Core Team.