

WINTER ARC – Data Science Roadmap (30 Days)

Challenge Overview

The Data Science track focuses on extracting insights from data using statistics, visualization, and machine learning. Participants will move from data handling fundamentals to building and presenting a complete data-driven project by the end of Winter Arc.

30-Day Learning Roadmap

- Days 1–3: Data science overview, Python revision, and environment setup
- Days 4–6: NumPy and Pandas for data manipulation and cleaning
- Days 7–9: Exploratory Data Analysis (EDA) and data visualization
- Days 10–12: Statistics and probability fundamentals
- Days 13–15: Feature engineering and feature selection
- Days 16–18: Machine learning overview and regression models
- Days 19–21: Classification models and evaluation metrics
- Days 22–23: Unsupervised learning and dimensionality reduction
- Days 24–25: Model tuning and optimization
- Days 26–29: Mini project planning, modeling, and insights generation
- Day 30: Project presentation and reflection

Posting & Submission Rules (IMPORTANT)

- For all TECH challenges (Data Science included), daily task completion MUST be posted on LinkedIn or X (Twitter).
- Tag the official Winter Arc / Matrix handle and use the official hashtags.
- GitHub notebooks, visualizations, dashboards, or learning summaries are acceptable.
- Submissions without social proof will not be eligible for XP.

What to Post Daily

- Concepts or techniques learned today
- Graphs, plots, or notebook screenshots
- Insights discovered from data
- One key takeaway or mistake

Strategies to Win the Data Science Track

- Focus on understanding data before modeling.
- Always visualize before drawing conclusions.
- Maintain clean and well-documented notebooks.
- Evaluate models using proper metrics, not intuition.
- Use Sundays or lighter days for revision and insight generation.

Fair Play & Discipline

- All datasets and notebooks must be used ethically.
- Plagiarism or copying notebooks without understanding is prohibited.
- AI usage must be disclosed clearly.
- Matrix reserves the right to revoke XP, ranks, or rewards.