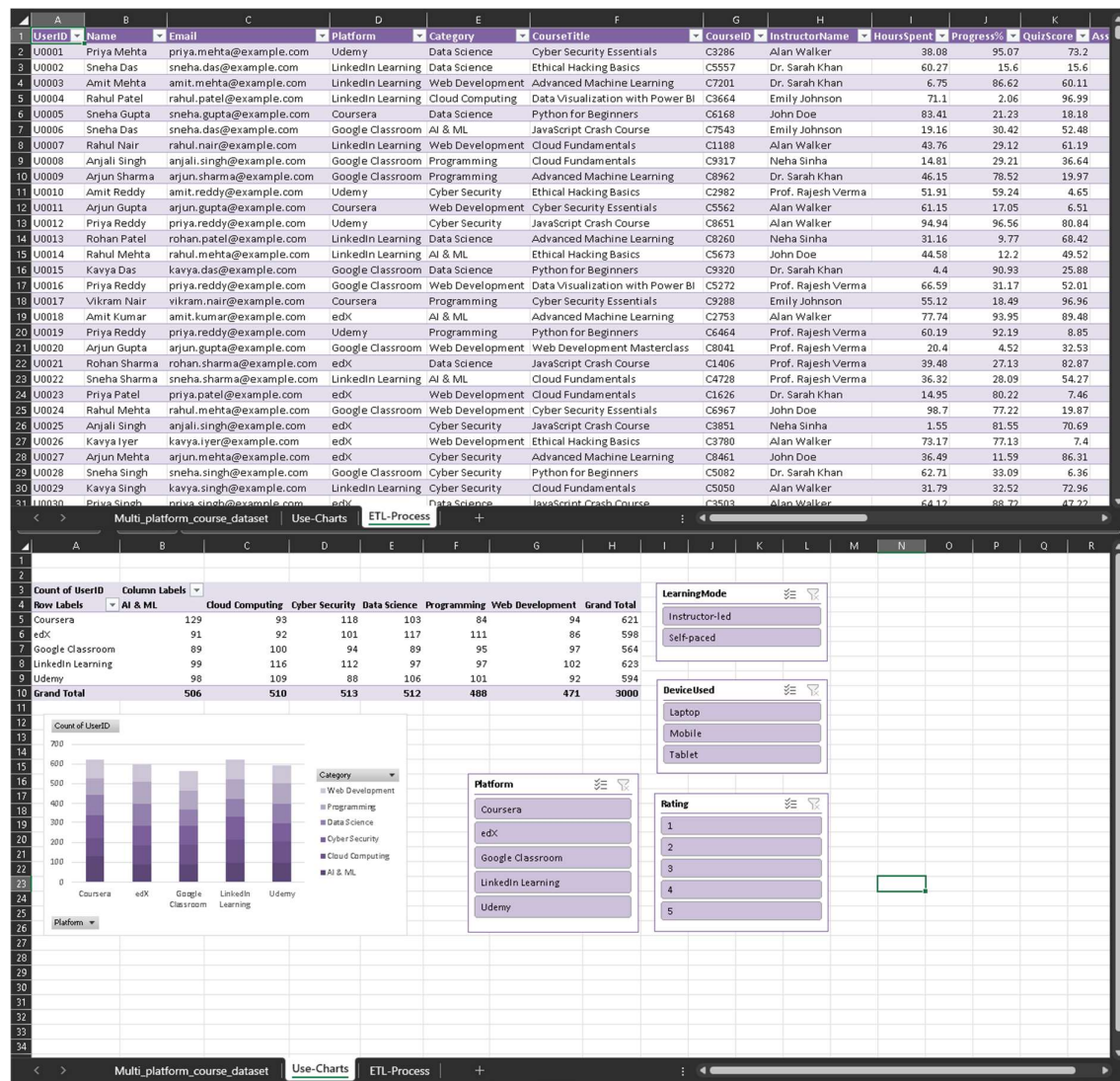


# E-Learning Insights Hub

## Problem Statement:

E-Learning generate large amounts of learner data, but organizations often struggle to understand learner behaviour, course effectiveness, and performance differences across platforms, countries, and instructors. High dropout rates, low completion percentages, inconsistent course ratings, and varying engagement patterns make it challenging to improve course quality. This project aims to develop a comprehensive Power BI dashboard that delivers clear insights into learner progress, platform performance, drop reasons, and rating trends to support better decision-making and continuous improvement.

## Excel:



## Power BI:

### ETL:

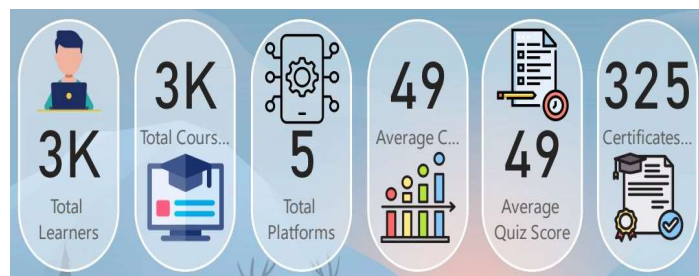
Split columns into 4 Tables. These are Users, Courses, Platform, and Performance.

- ✓ **Users** (UserID, Name, Email, Country, DeviceUsed)
- ✓ **Courses** (CourseID, CourseTitle, Category, InstructorName, CourseDifficulty, CourseLanguage)
- ✓ **Platform** (PlatformName, SubscriptionType, LearningMode)
- ✓ **Performance** (UserID, CourseID, PlatformName, EnrolledDate, CompletionDate, HoursSpent, Progress%, QuizScore, Rating, AssignmentsSubmitted, CertificateEarned, EngagementLevel, DropReason).

## Overview Dashboard Page:

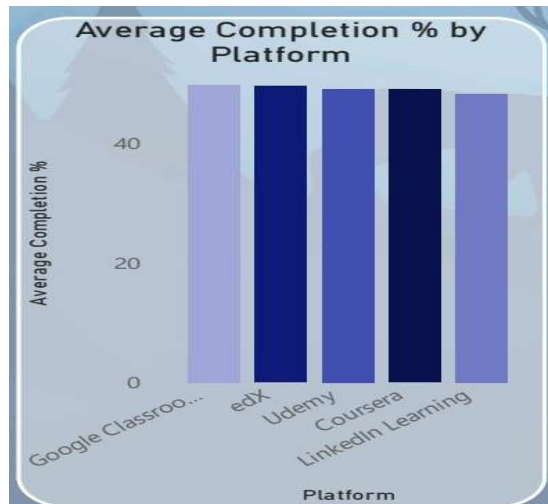
### KPI Cards (One-Line Descriptions)

- ✓ **Total Learners** – Shows the total number of unique learners in the system.
- ✓ **Total Courses** – Displays the total count of available courses.
- ✓ **Total Platforms** – Indicates how many learning platforms are included in the data.
- ✓ **Average Completion %** – Shows the overall average course completion percentage.
- ✓ **Average Quiz Score** – Displays the average quiz performance across all learners.
- ✓ **Certificates Earned** – Counts how many learners successfully earned certificates.

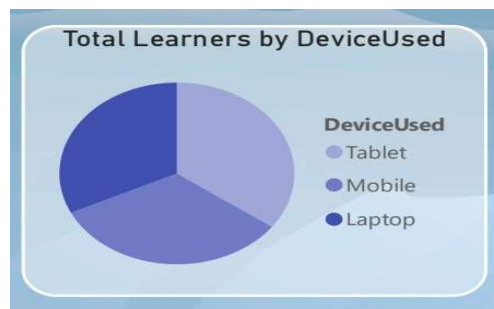


## Visuals

- ✓ **Completion % by Platform (Stacked Column Chart)** – Compares learners' completion percentages across platforms.



- ✓ **Learners by Device Used (Pie Chart)** – Shows which devices learners use most for accessing content.



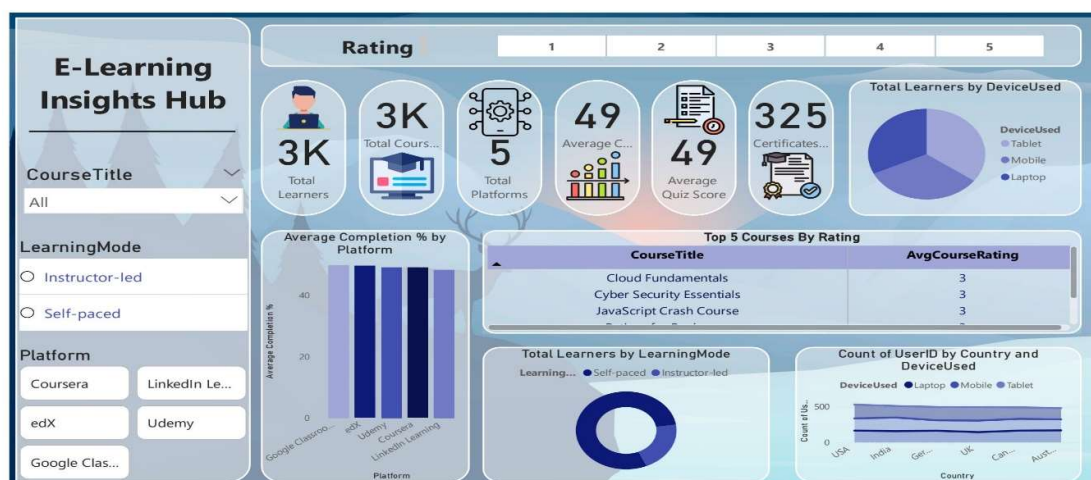
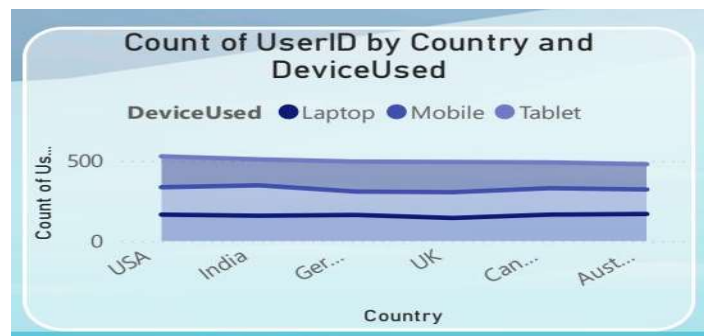
- ✓ **Learning Mode Distribution (Donut Chart)** – Displays the share of online, hybrid, and self-paced learning modes.



- ✓ **Top 5 Courses by Rating (Clustered Bar Chart)** – Highlights the highest-rated courses.

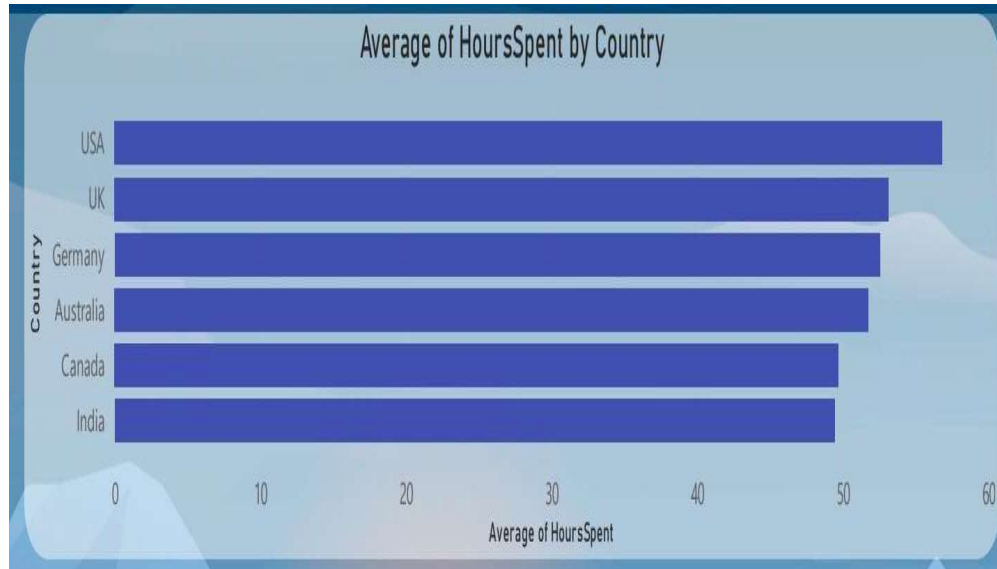


- ✓ **Learners by Country (Area Visual)** – Maps the geographic distribution of learners worldwide.



## Learner Insights:

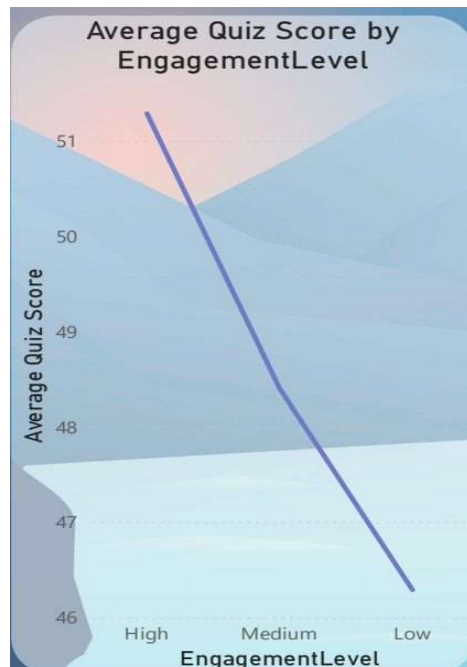
- ✓ **Average Hours Spent by Country (Bar Chart)** – Compares learning time across different countries.



- ✓ **Learners by Device (Tree map)** – Represents device usage with proportional blocks.



- ✓ **Engagement vs Quiz Score (Line Chart)** – Shows how engagement levels affect quiz performance.



- ✓ **Country/Device/Engagement Slicers** – Allows filtering of learner data by key attributes.

A form for filtering learner data. It has a blue background with a faint mountain pattern. The form is divided into three sections: CourseTitle, DeviceUsed, and EngagementLevel. CourseTitle has a dropdown menu with "All" selected. DeviceUsed has three radio buttons: Laptop, Mobile, and Tablet, with Tablet selected. EngagementLevel has three buttons: High, Medium, and Low.

**CourseTitle**

All

**DeviceUsed**

☐ Laptop

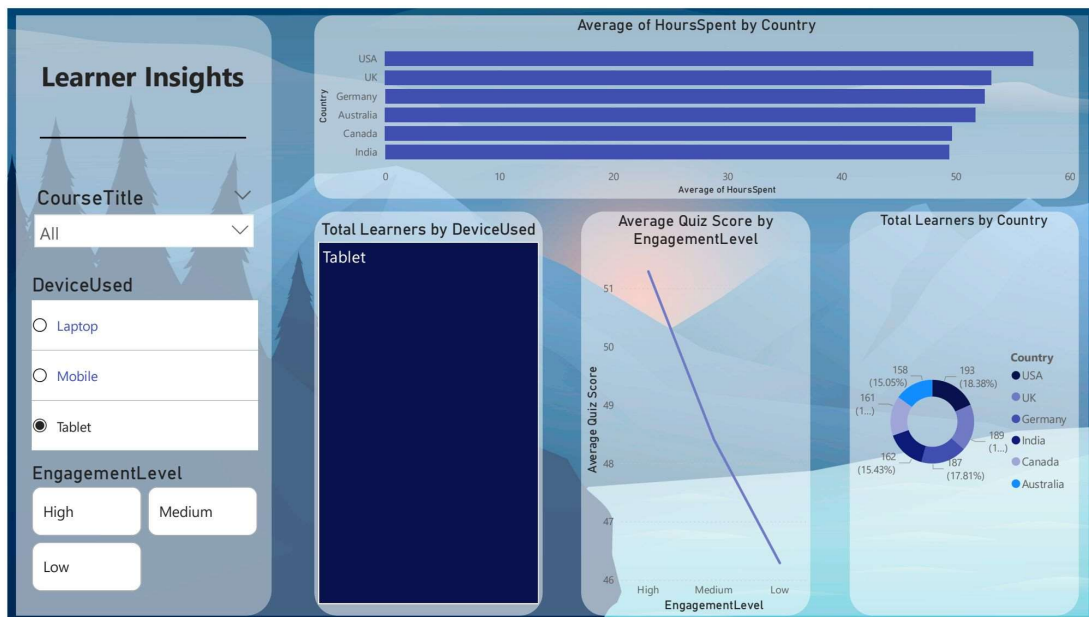
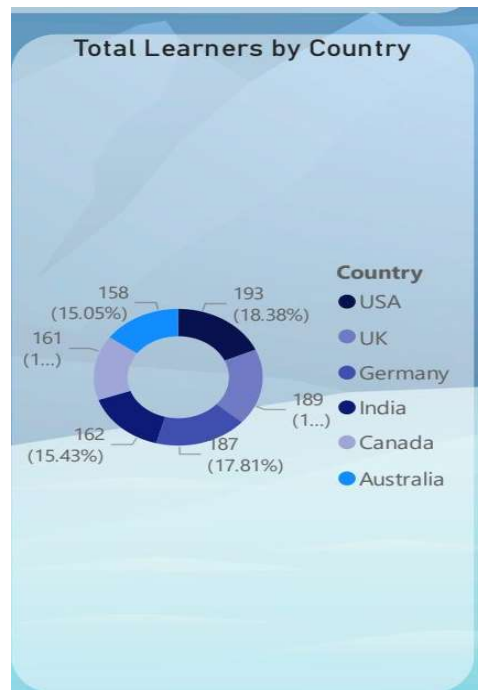
☐ Mobile

☒ Tablet

**EngagementLevel**

High Medium Low

- ✓ **Total Learners by Country (Donut Chart)** – Displays the total learners by country.

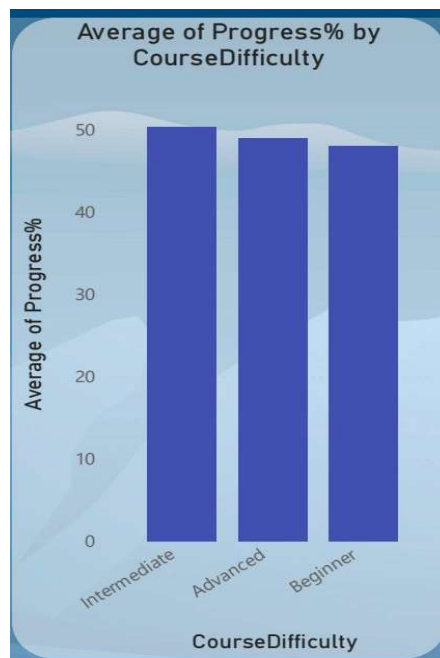


## Course Performance:

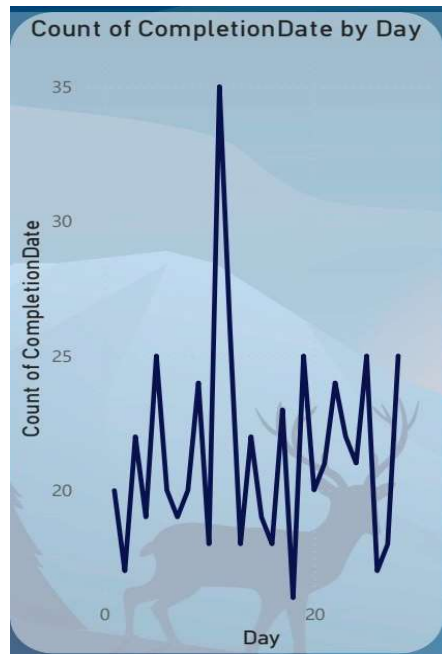
- ✓ **Course Performance Table** – Lists each course with ratings, quiz scores, and completion rate.

Course by Instructor Name,Avg Course Rating,Average Quiz Score				
CourseTitle	InstructorName	AvgCourseRating	Average Quiz Score	Average Completion %
Advanced Machine Learning	Alan Walker	4	53.65	58.64
Advanced Machine Learning	Dr. Sarah Khan	3	52.16	55.50
Advanced Machine Learning	Emily Johnson	3	48.80	54.20
Advanced Machine Learning	John Doe	3	54.84	36.80
Advanced Machine Learning	Neha Sinha	3	45.00	44.30
Advanced Machine Learning	Prof. Raiesh Verma	2	42.91	51.04

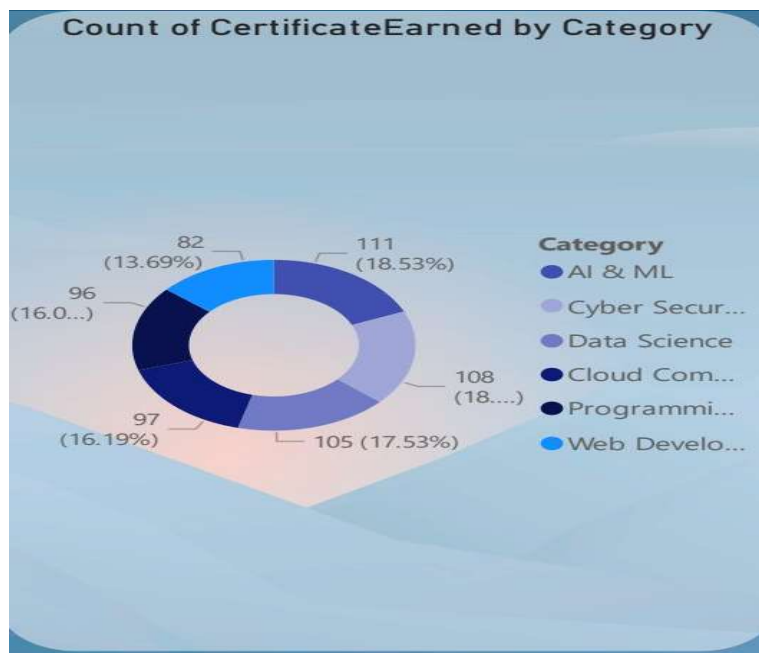
- ✓ **Course Difficulty vs Progress (Column Chart)** – Shows how difficulty level impacts learners' progress.

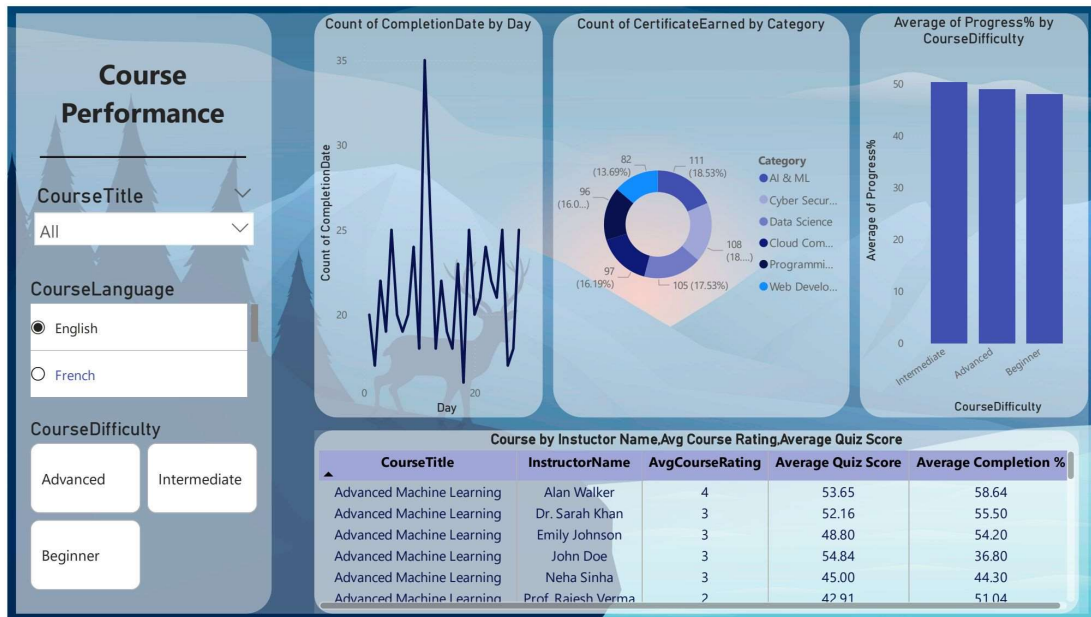


- ✓ **Completion Trend Over Time (Line Chart)** – Tracks course completion patterns over time.



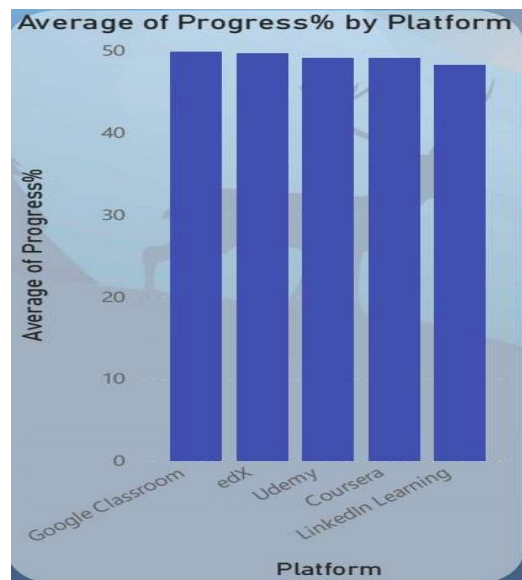
- ✓ **Certificates by Course Category (Donut Chart)** – Shows which course categories earn the most certificates.



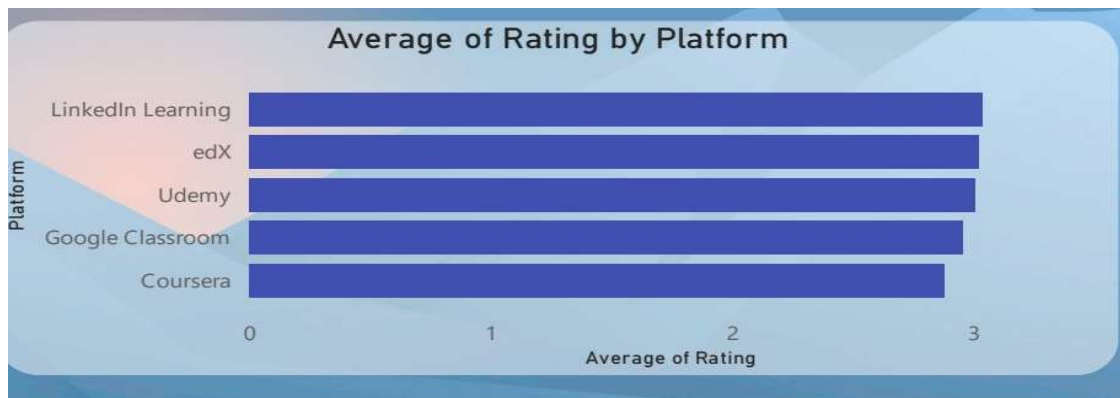


## Platform Comparison:

- ✓ **Progress by Platform (Stacked Column Chart)** – Compares average progress across platforms.



- ✓ **Average Rating by Platform (Bar Chart)** – Highlights differences in learner satisfaction across platforms.



- ✓ **Subscription Type Distribution (Pie Chart)** – Shows the share of premium, free, and trial subscriptions.

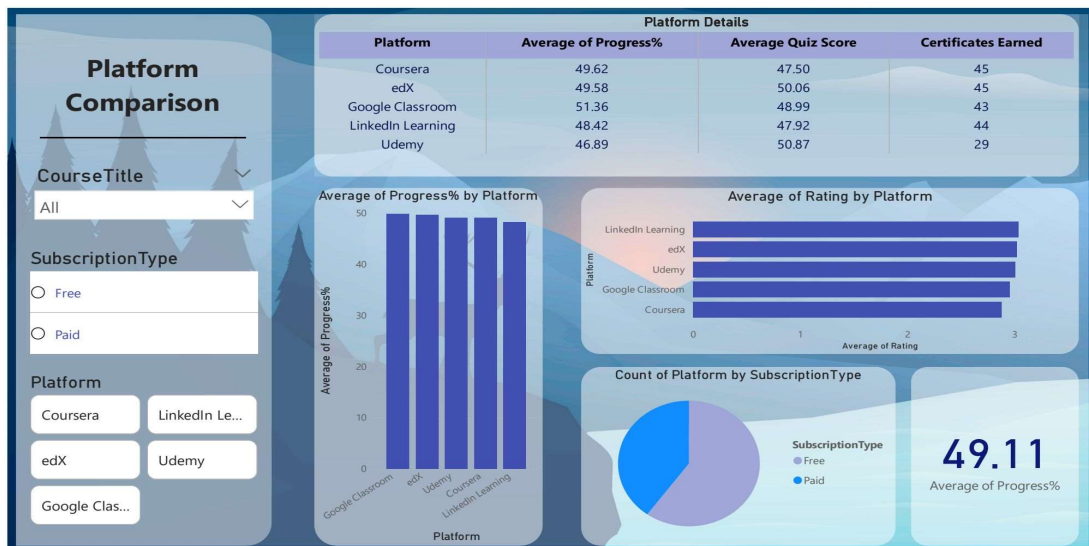


- ✓ **Top Performing Platform (Card)** – Displays the platform with the highest average progress.



- ✓ **Platform Comparison Table** – Summarizes progress, quiz scores, and certificates for each platform.

Platform Details			
Platform	Average of Progress%	Average Quiz Score	Certificates Earned
Coursera	49.62	47.50	45
edX	49.58	50.06	45
Google Classroom	51.36	48.99	43
LinkedIn Learning	48.42	47.92	44
Udemy	46.89	50.87	29



## Solution:

E-Learning insights hub Dashboard serves as a powerful analytical tool that transforms raw learner data into meaningful insights. By highlighting engagement gaps, platform-level performance, content quality issues, and geographic trends, it enables e-learning teams to take targeted actions that improve overall learning outcomes. The dashboard not only enhances course quality and user experience but also supports strategic decisions that drive higher learner satisfaction, better completion rates, and long-term growth for the e-learning ecosystem.