



The Course Compass: Navigating the World of Udemy with Actionable Analytics

Date: April 20, 2023

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MISM 6213 - Business Information Design, Quality, and Strategy

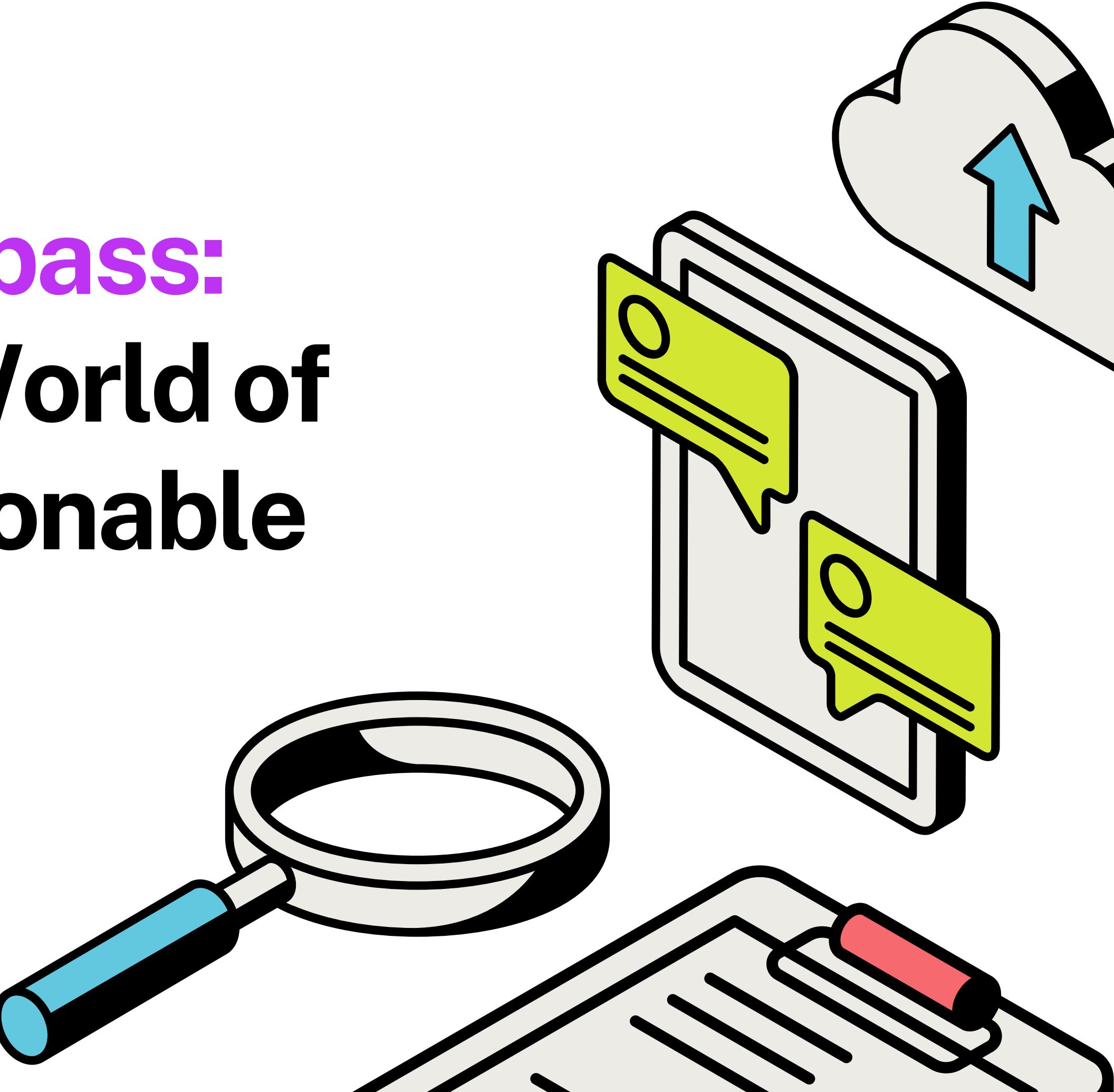
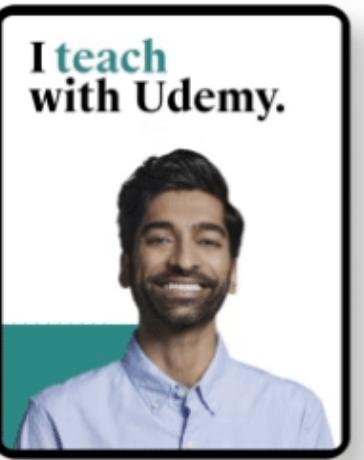


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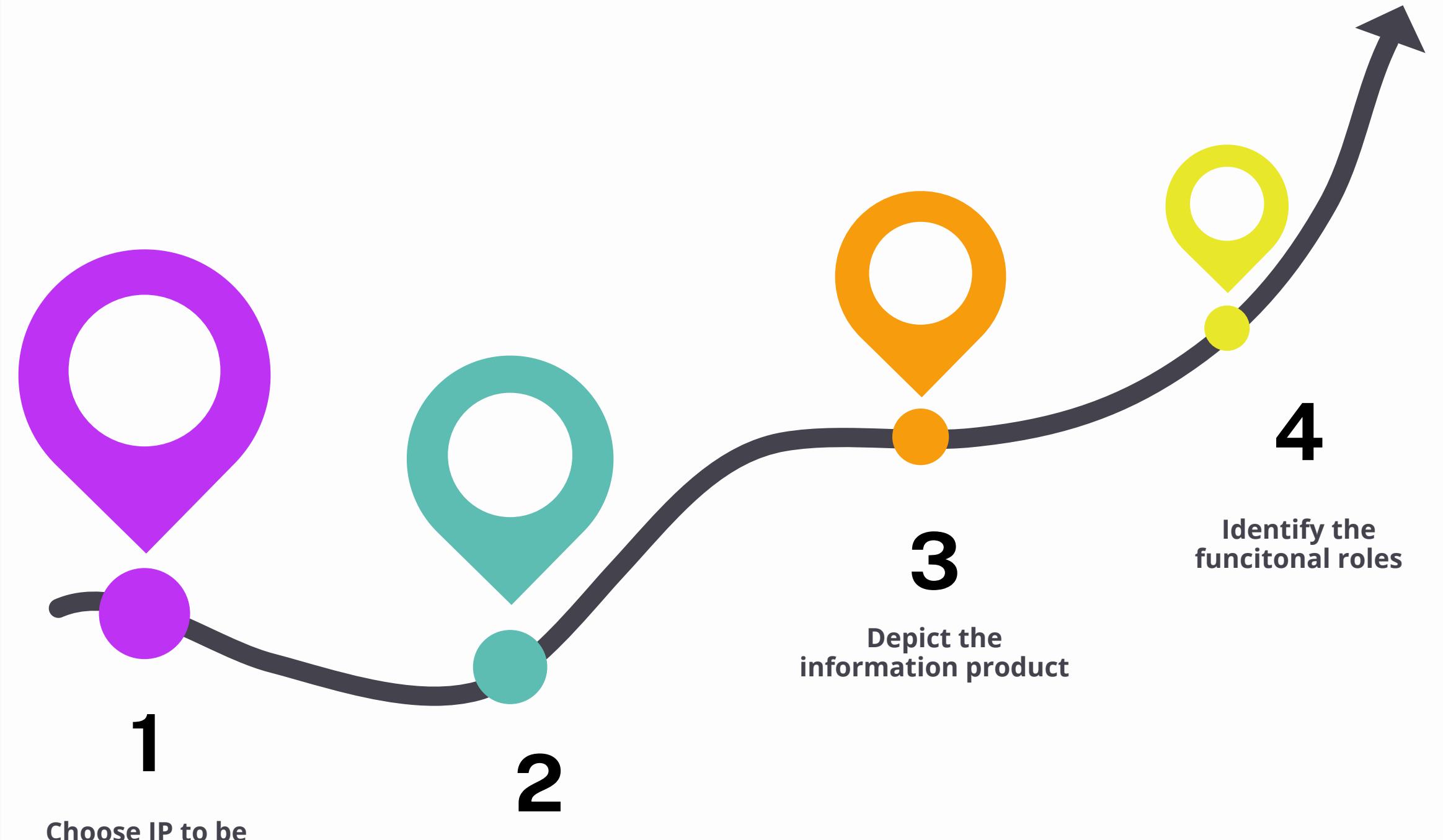
About the Company

An education technology company that provides an online learning and teaching platform. **Mission** is to improve lives through learning by providing flexible, effective skill development to empower organizations and individuals.



- **More than 59M learners and over 800M course enrollments**
- **More than 70K instructors teaching over 200K courses in 75+ languages**
- **Over 14K enterprise customers and nearly 60% of the Fortune 100 are Udemy Business customers**

Creating IP Map



Market Saturation

Retention and Engagement



Brand Recognition

Stakeholders



Striving to improve their **competitiveness** and provide better courses to **enhance** the **learners' experience**. To achieve this, optimize its course offerings, and maximize its performance, Udemy has recognized the need for a comprehensive information product to keep track of elements such as course titles, number of subscribers, ratings, number of reviews, discount price impact, number of lectures per course, etc.

IP (storage type) : Database Management System



The Benefits of Using a DBMS for Course Performance Analysis at Udemy

- End users of the DBMS at Udemy: **data analysts** and **executives**.
- Data analysts use the DBMS to perform **queries**, generate **reports**, and create **data visualizations** to identify patterns and trends in course performance.
- Data analysts may also use the DBMS to **clean**, **transform**, and **merge** data from different sources.
- Executives use the DBMS to access **reports** and **dashboards** that summarize key performance metrics and inform strategic decisions.
- Course performance data includes **metrics** like ratings, reviews, completion rates, and instructor engagement
- The DBMS can also **integrate data** from other sources, such as marketing campaigns and user demographics
- Data-driven decisions about content, marketing, and pricing strategies can be made based on insights from the DBMS.

Use this information to make data-driven decisions about pricing strategies, marketing efforts, course content, and instructor selection.

Identify popular courses, top-performing instructors, and high-traffic sources to optimize their business operations.

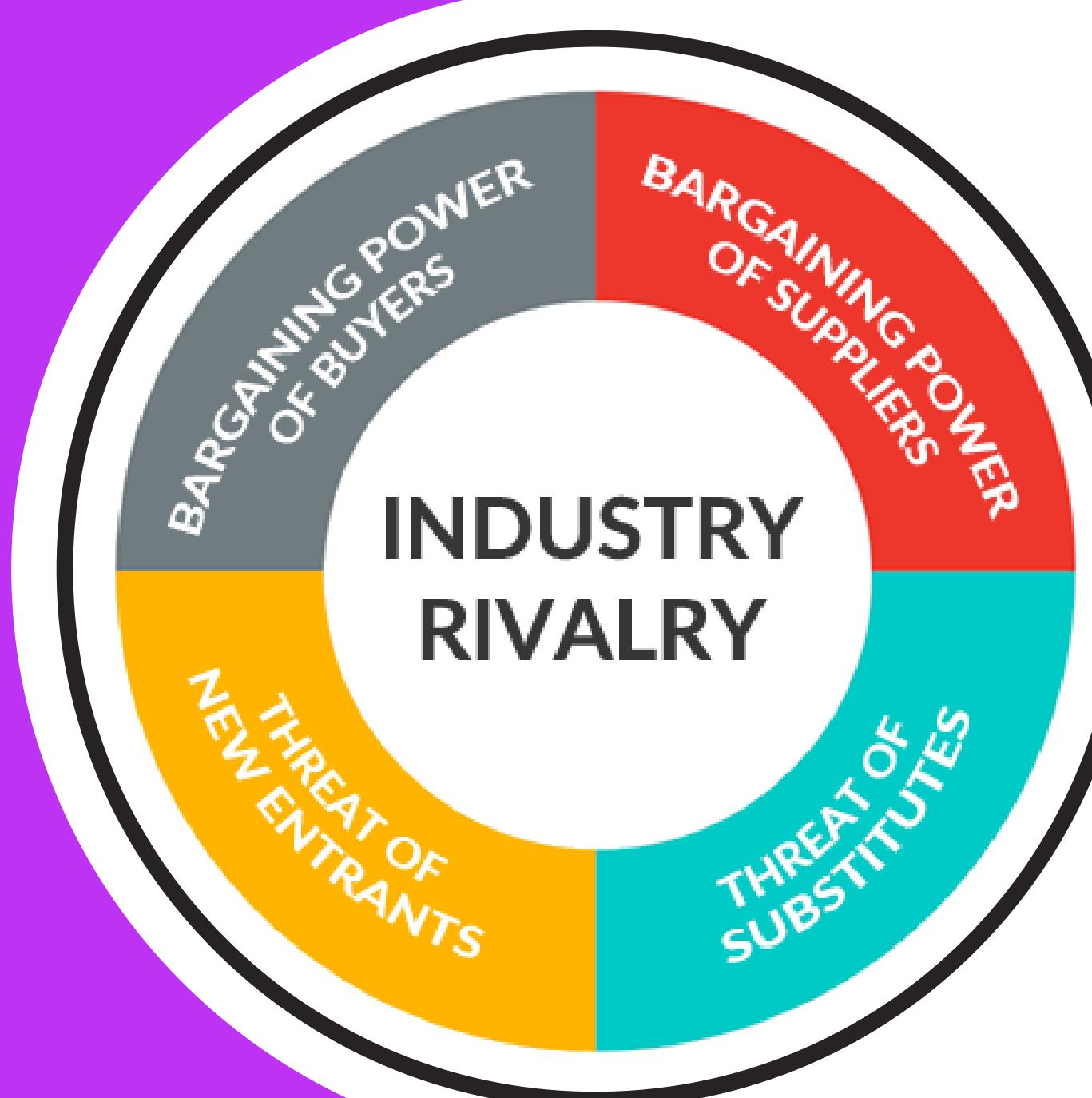
Executives may choose to invest more resources in developing popular course topics or formats.

If a course is underperforming, executives may evaluate its content, marketing, or pricing to improve its performance or remove it from the platform.

Stakeholders



Executives



Information Product

For The Five Strategic Forces

This information is used to identify trends, gaps, and opportunities in course offerings and create a more compelling offering for potential customers. By collecting, analyzing, and utilizing course performance data, Udemy gains a competitive advantage over its rivals in the industry

Industry Rivalry

Threat of New Entrants

Data Collector



Data Custodian

Database administrators, IT professionals, and data management experts

Data Consumer

Data analysts and Executives responsible for making strategic decisions based on course performance data

Data Source [kaggle](#)

A compilation of all the BUSINESS related courses (10 thousand courses) which are available on Udemy's website

id	title	url	is_paid	num_subscribers	avg_rating	avg_rating_recent	rating	num_reviews	is_wishlist	num_published_lectures	num_published_practice_tests	created	published_time	discount_price_amount	discount_price_currency	discount_price_string	price_detail_amount	price_detail_currency	price_detail_price_string
762616	The Complete SQL Bootcamp 2020: Go from Zero to Hero	/course/the-complete-sql-bootcamp/	TRUE	295509	4.66019	4.67874	4.67874	78006	FALSE	84	0	2016-02-14T22:57:48Z	2016-04-06T05:16:11Z	455	INR	,₹455	8640	INR	,₹8,640
937678	Tableau 2020 A-Z: Hands-On Tableau Training for Data Science	/course/tableau10/	TRUE	209070	4.58956	4.60015	4.60015	54581	FALSE	78	0	2016-08-22T12:10:18Z	2016-08-23T16:59:49Z	455	INR	,₹455	8640	INR	,₹8,640
1361790	PMP Exam Prep Seminar - PMBOK Guide 6	/course/pmp-pmbok6-35-pdus/	TRUE	155282	4.59491	4.59326	4.59326	52653	FALSE	292	2	2017-09-26T16:32:48Z	2017-11-14T23:58:14Z	455	INR	,₹455	8640	INR	,₹8,640
648826	The Complete Financial Analyst Course 2020	/course/the-complete-financial-analyst-course/	TRUE	245860	4.54407	4.53772	4.53772	46447	FALSE	338	0	2015-10-23T13:34:35Z	2016-01-21T01:38:48Z	455	INR	,₹455	8640	INR	,₹8,640
637930	An Entire MBA in 1 Course:Award Winning Business School Prof	/course/an-entire-mba-in-1-courseaward-winning-business-school-prof/	TRUE	374836	4.4708	4.47173	4.47173	41630	FALSE	83	0	2015-10-12T06:39:46Z	2016-01-11T21:39:33Z	455	INR	,₹455	8640	INR	,₹8,640
1208634	Microsoft Power BI - A Complete Introduction [2020 EDITION]	/course/powerbi-complete-introduction/	TRUE	124180	4.56228	4.57676	4.57676	38093	FALSE	275	0	2017-05-08T13:03:21Z	2017-05-15T18:48:54Z	455	INR	,₹455	8640	INR	,₹8,640
864146	Agile Crash Course: Agile Project Management; Agile Delivery	/course/agile-crash-course/	TRUE	96207	4.32383	4.29118	4.29118	30470	FALSE	23	0	2016-05-30T22:57:40Z	2016-06-23T17:49:26Z	455	INR	,₹455	8640	INR	,₹8,640

Data Wrangling

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Data Quality Workflow

1.	Conduct a thorough data quality analysis
2.	Identify sources, collection methods, accuracy, completeness, missing data, duplicates, and outliers
3.	Apply data cleansing techniques to remove inconsistencies and errors
4.	Remove duplicates, fill in missing values, and correct inaccurate or inconsistent data
5.	Use data integration techniques to combine data sets from different sources into a single, unified data set
6.	Ensure data consistency and usability for analysis
7.	Perform data validation and verification to ensure accuracy, completeness, and consistency
8.	Compare data sets to external sources and perform statistical analysis
9.	Thorough data quality processes are critical for achieving desired outcomes
10.	Ensure highest quality of data is used in the creation of the IP.



Entities:

1. Instructor
2. Course
3. Category
4. Traffic
5. Review
6. User

Relationships:

1. Instructor – Course
2. Category – Course
3. Traffic – Course
4. Review – Course
5. User – Review

Cardinality of Relationships Among Entities

- Instructor (mandatory many)  Course (mandatory one)
- Category (mandatory one)  Course (optional many)
- Traffic (optional many)  Course (mandatory one)
- Review (mandatory one)  Course (optional many)
- User (mandatory one)  Review (optional many)

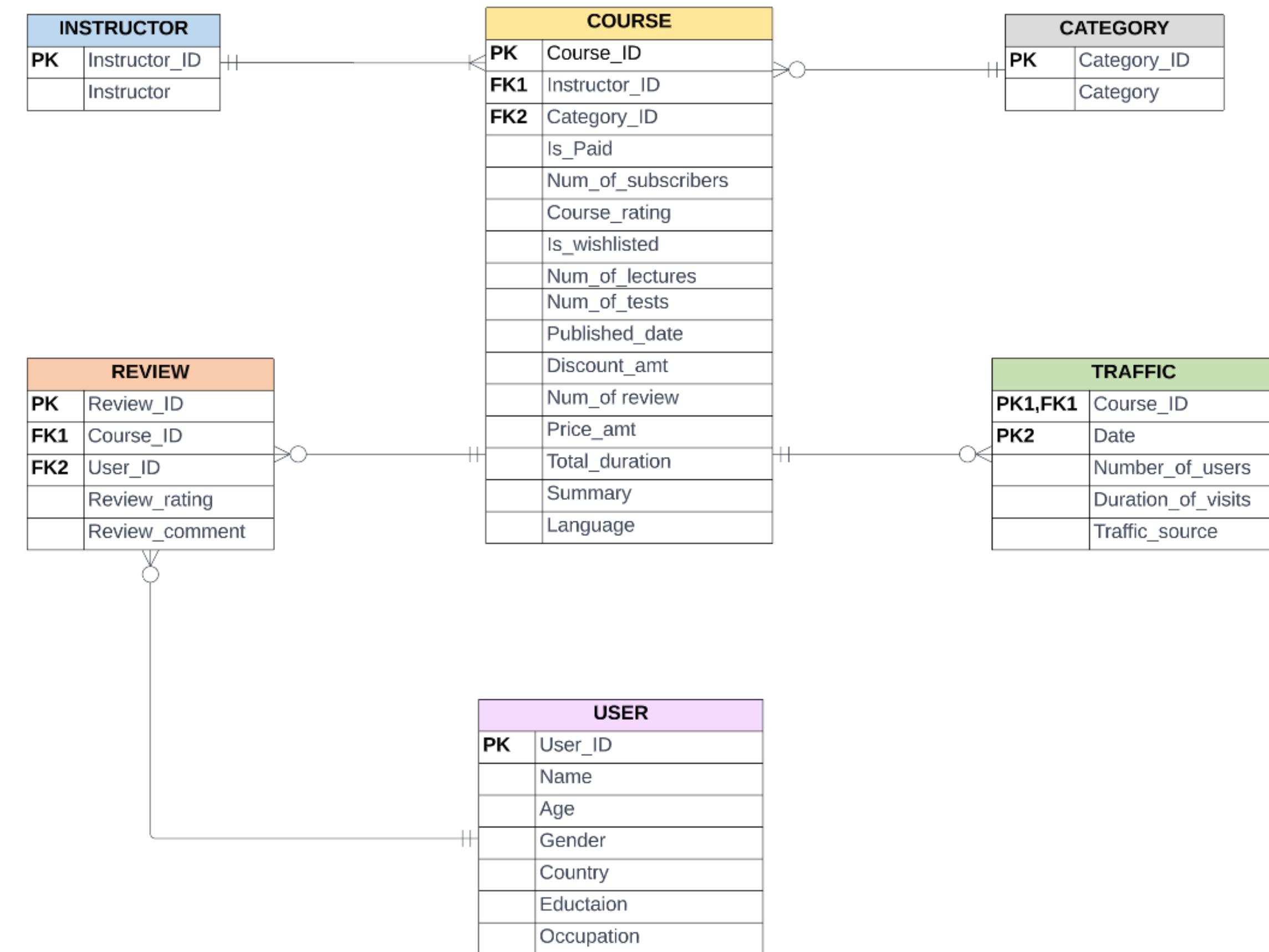


Entities and Attributes

CATEGORY		COURSE	
PK	Category_ID	PK	Course_ID
	Category	FK1	Instructor_ID
		FK2	Category_ID
			Is_Paid
			Num_of_subscribers
			Course_rating
			Is_wishlisted
			Num_of_lectures
			Num_of_tests
			Published_date
			Discount_amt
			Num_of_review
			Price_amt
			Total_duration
			Summary
			Language

INSTRUCTOR		REVIEW	
PK	Instructor_ID	PK	Review_ID
	Instructor	FK1	Course_ID
		FK2	User_ID
			Review_rating
			Review_comment

USER		TRAFFIC	
PK	User_ID	PK1,FK1	Course_ID
	Name	PK2	Date
	Age		Number_of_users
	Gender		Duration_of_visits
	Country		Traffic_source
	Education		
	Occupation		

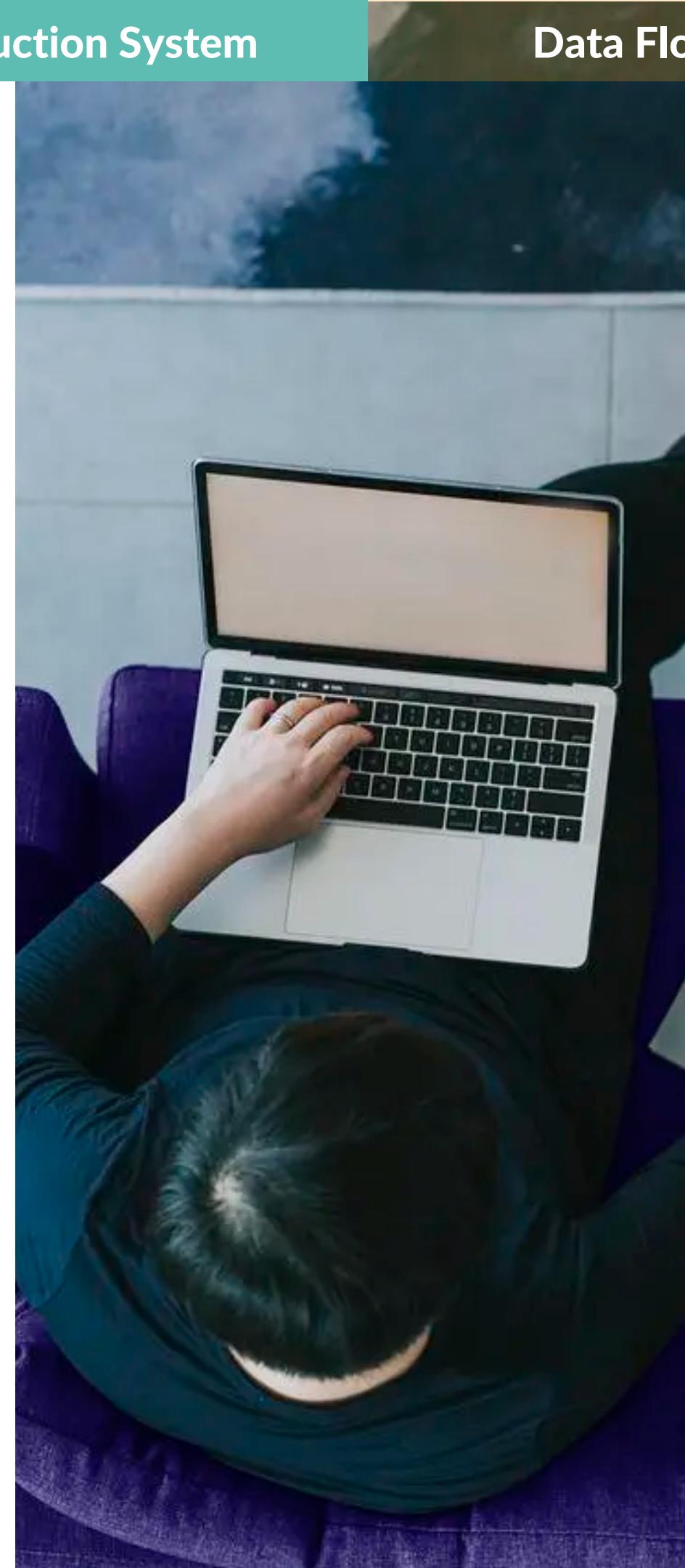


Entity Relationship Diagram

Why to transform database insights into Analytics with Dashboard

As the volume of data generated by online courses continues to grow, it has become increasingly important for platforms like Udemy to organize and analyze this data effectively. One way to do this is by using a dashboard to visualize key metrics and trends.

Dashboard



Necessary Step for Effective Course Management

- Provides Easy-to-Read, Real-Time Overview of Key Metrics and Data Points
- Allows for Tracking Course Performance and User Engagement
- Helps Identify Areas for Improvement

Clear and Concise Visual Representation of Data

- Enables Quick Identification of Trends and Potential Issues
- Facilitates Informed Decision Making for Course Optimization

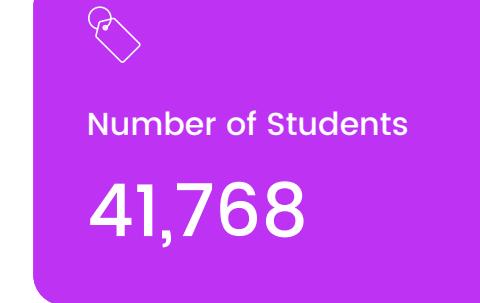
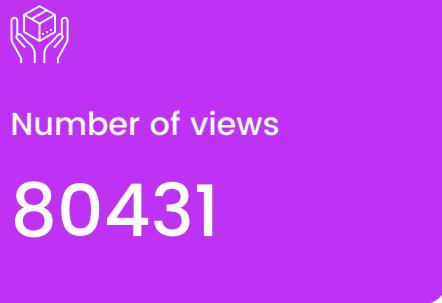
Facilitates Data Sharing Across the Organization

- Enables Marketing and Finance Teams to Understand Course Impact
- Helps Identify Potential for Growth and Improvement



Hello UdemyExec

Search



Average Course Cost

\$ 137.061

Average Number of Lessons

8



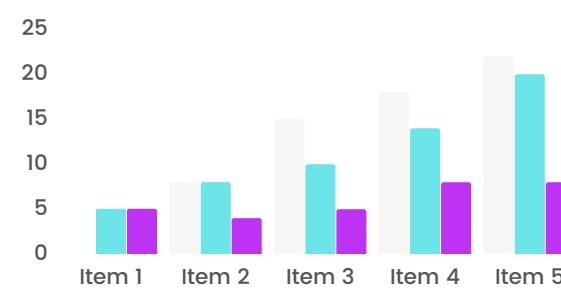
Total Courses

137



Active user courses

90-110

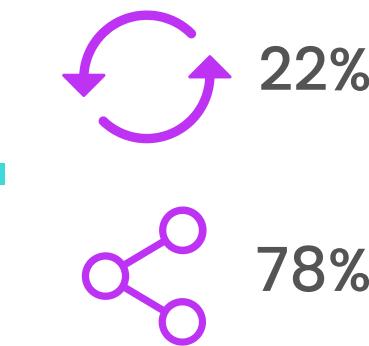
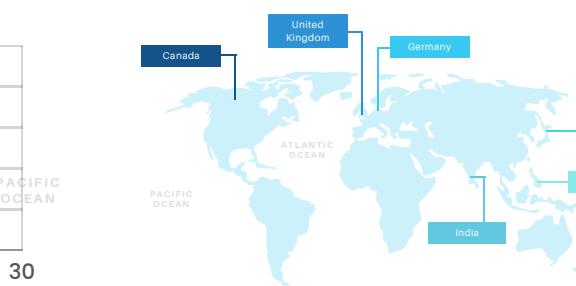
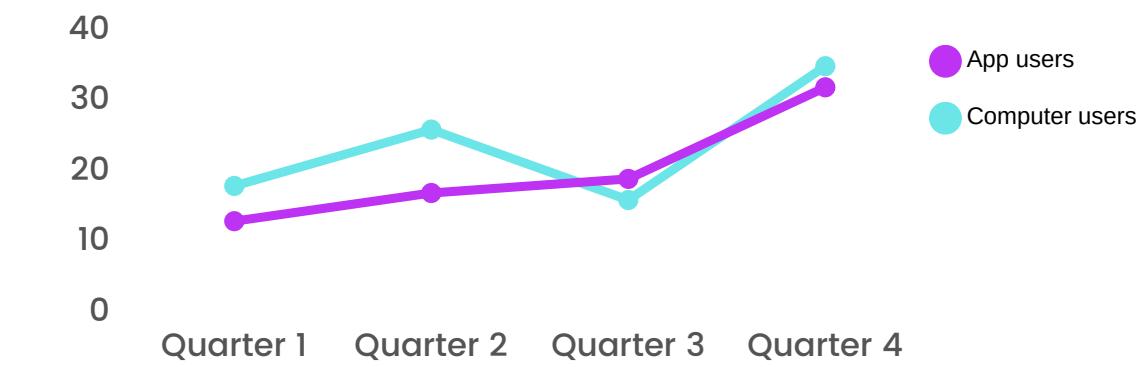


Top Category



- Business
- Technology
- Soft skills

Number of Subscribers Over Time



Word Clouds or Sentiment Analysis

Help understand the common themes or sentiments expressed by users.



Thank you.

udemy

