

Higher Education Courses Analysis using Power BI

Internship: SoulVibe.Tech - Power BI Task (Batch 10)

Objective:

To clean, analyze, and visualize higher education course data across districts, universities, and colleges using Power BI.

Dataset:

DA Batch 10 Data set.csv — includes District, Taluka, College Name, University, Course Name, Course Type, Duration, Aided/Unaided, Category, and Professional Status.

Key Actions Performed:

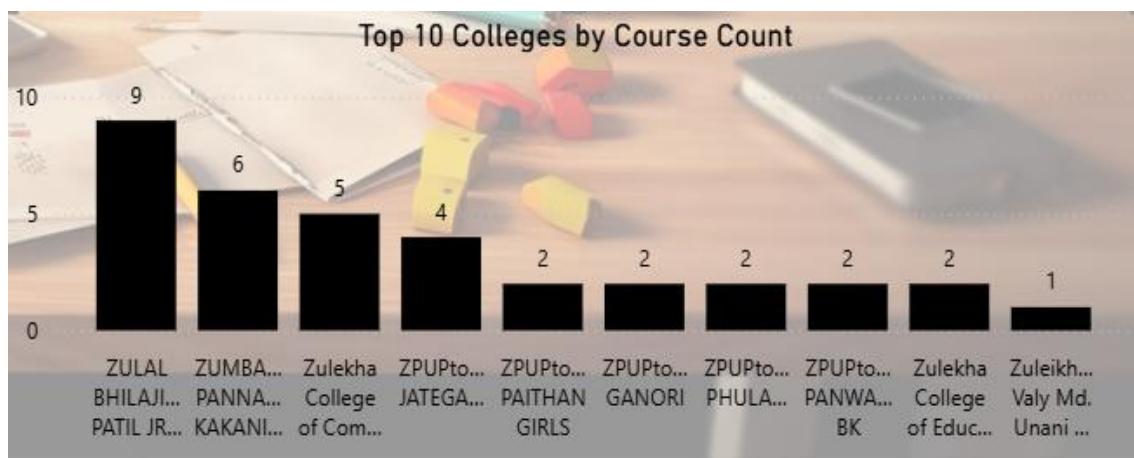
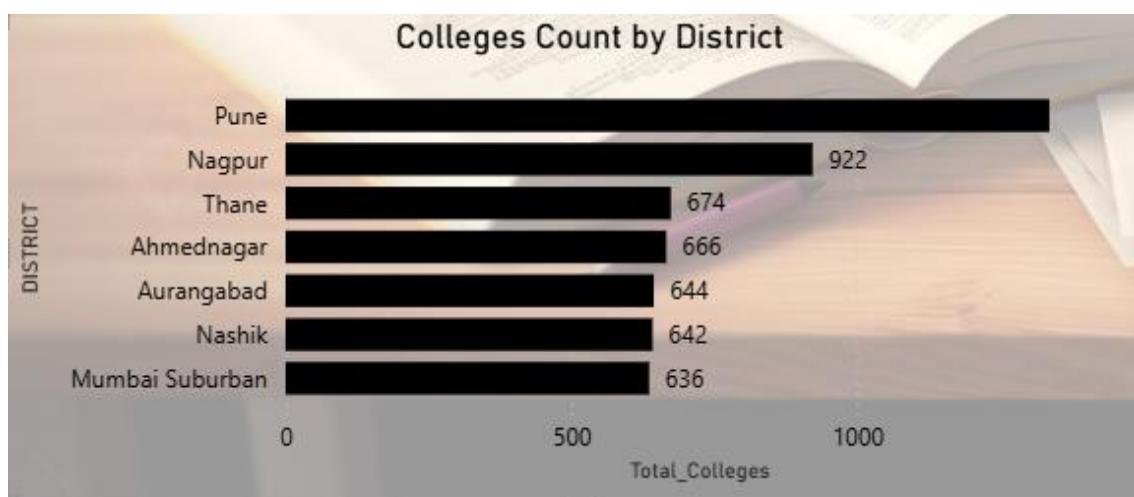
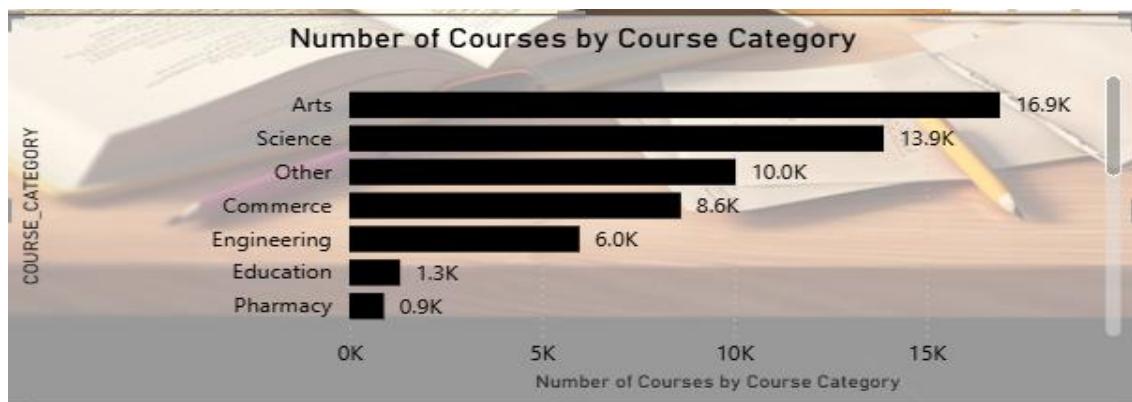
- Cleaned data in Power Query (trimmed text, fixed nulls, renamed columns)
- Extracted "Specialization" from Course Name
- Created "Duration Category" column (Short, Medium, Long)
- Built multi-page Power BI dashboard with KPIs and dynamic charts
- Designed a Q&A report page answering 6 specific analysis questions

Core Visualizations:

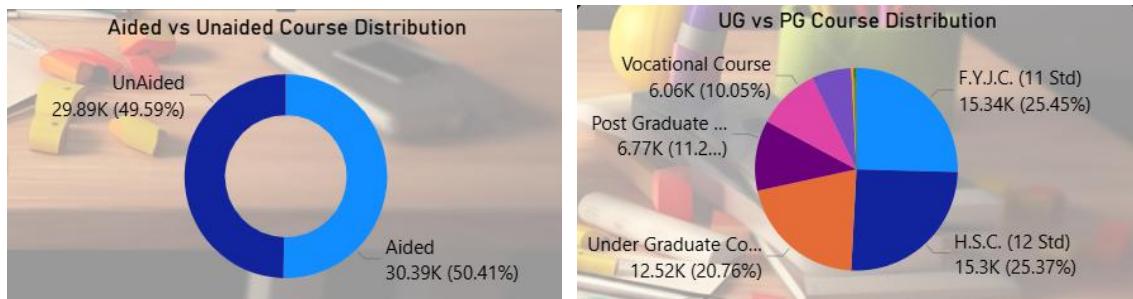
- **KPI Cards:** Total Colleges, Unique Courses, % Professional, Avg Duration



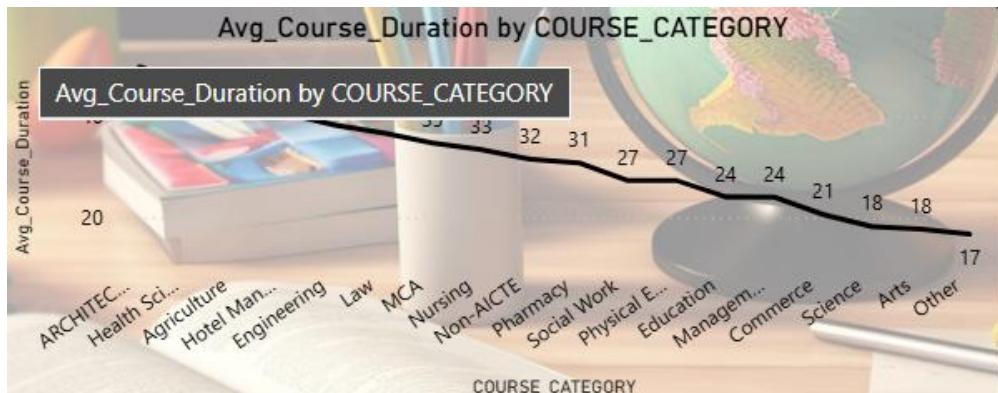
- **Bar Charts:** Course Categories, Colleges by District, Top 10 Colleges



- **Donut Charts:** Aided vs Unaided, UG vs PG Split



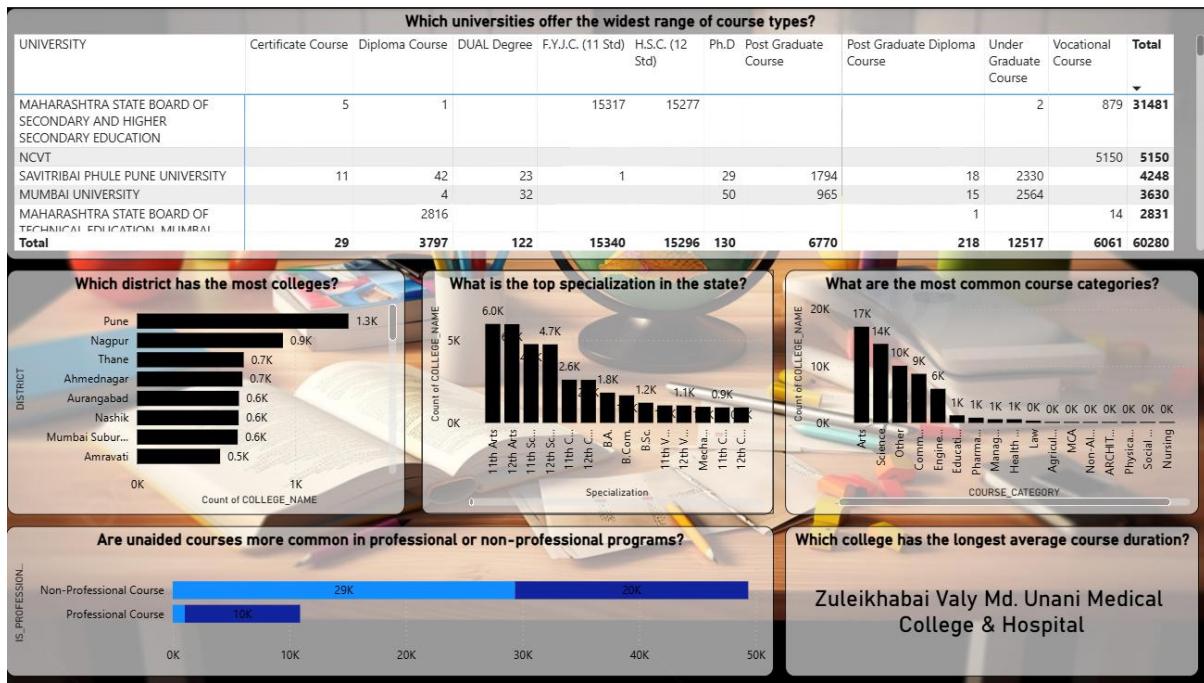
- **Line Chart:** Avg Duration by Category



- **Matrix:** University vs Course Type

University vs Course Type with Avg Duration											
UNIVERSITY	Certificate Course	Diploma Course	DUAL Degree	F.Y.J.C. (11 Std)	H.S.C. (12 Std)	Ph.D	Post Graduate Course	Post Graduate Diploma Course	Under Graduate Course	Vocational Course	Total
INDIAN NURSING COUNCIL NEW DELHI									48.00		48.00
MAHATMA GANDHI MISSION AURANGABAD									48.00		48.00
MAHARASHTRA UNIVERSITY OF HEALTH SCIENCES NASHIK						35.68		24.00	52.96	24.00	46.06
DATTA MEGHE INSTITUTE OF MEDICAL SCIENCE UNIVERSITY						36.00			54.00		45.00
Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli Dist. Ratnagiri	39.00								46.40		44.84
MAHARASHTRA NATIONAL LAW UNIVERSITY MUMBAI		60.00				12.00					44.00
MGMC INSTITUTE OF HEALTH SCIENCE KAMOTHE									42.00		42.00
DR. R.A.T. UNIVERSITY		36.00				24.00			47.78		41.40
Total	14.48	32.13	54.98	12.00	12.00	52.43	24.81	21.19	38.60	19.76	21.22

- **Q&A Page:** Six visual answers



Key Insights

◆ General Course Overview

- **Total Colleges:** 15,265 unique institutions
- **Unique Courses Offered:** 15,265
- **Average Course Duration:** 21.22 months
- **Professional Courses:** Only 18.12% of all courses are classified as professional

◆ Course Distribution by Type & Category

- **Most Offered Categories:** Arts, Science, Commerce
- **Top Specializations:** Arts, Science, Commerce, 11th and 12th-grade streams
- **Common Course Types:** F.Y.J.C (11th Std), H.S.C (12th Std), UG & PG Courses
- **Longest Duration Categories:** Architecture, Health Sciences, Agriculture (avg 40–50 months)

◆ Funding and Accessibility

- **Aided vs Unaided:** Almost evenly split (50/50) with slightly more Aided courses
- **Unaided Courses Dominance:** 74% of unaided courses are non-professional

◆ District & University Level Analysis

- **District with Most Colleges:** Pune (over 1,300 colleges), followed by Nagpur and Thane
- **University with Widest Range of Courses:** Maharashtra State Board (over 31,000 records)
- **Top Colleges by Course Count:** ZULAL BHILAJI PATIL JR. College and others with multi-disciplinary offerings

◆ Institutional Duration Insights

- **Longest Average Course Duration:** Zuleikhabai Valy Md. Unani Medical College & Hospital
- **Medical and Health-related colleges** tend to have the longest program durations

Interactive Features:

- Slicers for Course Category, Type, College Type, and Professional Filter
- Page navigation buttons
- Cross-filtering across all visuals
-

Conclusion:

This analysis highlights that:

- **Foundational and general education (11th/12th, Arts, Science)** dominate course offerings
- **Professional education** is less prevalent and often tied to specific institutions
- There are **regional disparities**, with Pune leading in educational infrastructure
- **Data modeling and visual filtering** enabled stakeholder-friendly exploration of trends

The dashboard provides a valuable tool for **policymakers, education departments, and institutions** to make **data-driven decisions** regarding program offerings, expansion plans, and targeted improvements.