

# Student Feedback Analysis System

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A Digitized Approach to Feedback Collection and Analysis in Educational Institutions



Collect



Store



Analyze



Visualize

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# Introduction

Feedback plays a vital role in evaluating and improving the quality of education, teaching methods, and campus facilities. Traditional feedback systems are often manual, time-consuming, and lack proper analysis.

This project introduces a digitized feedback collection and analysis system using modern tools — Google Forms, Google Sheets, Python, and Power BI. It ensures seamless feedback collection, automated data storage, advanced data analysis, and professional dashboard reporting, making it highly effective for institutions.



## Traditional Feedback

- Paper-based forms
- Manual data collection
- Time-consuming analysis
- Limited data storage
- Basic statistical evaluation
- Delayed insights



Time-Intensive Process



## Digital Feedback System

- Online forms & automated collection
- Real-time data storage
- Advanced data analysis with Python
- Sentiment analysis of comments
- Interactive Power BI dashboards
- Immediate actionable insights



Efficient & Effective



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# Objectives

Our project aims to transform student feedback collection and analysis through the following key objectives:



## Design Structured Feedback Forms

Create comprehensive Google Forms for structured student feedback collection



## Real-time Data Storage

Collect and store responses in Google Sheets automatically and securely



## Advanced Data Analysis

Apply Python for data cleaning, statistical analysis, and sentiment detection



## Interactive Dashboards

Create visual Power BI dashboards for intuitive data interpretation



## Decision Support

Assist faculty and management in data-driven decision-making and continuous improvement



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# Scope of the Project

## Primary Coverage

This comprehensive feedback system enables students to provide feedback on three key areas:

-  Faculty performance and teaching effectiveness
-  Campus facilities and infrastructure quality
-  Overall educational experience and environment

## Key Scalability Features



### Multi-Level Support

Scalable for multiple classes, semesters, and faculty members simultaneously



### Flexible Analysis

Extendable for monthly, semester-wise, or yearly data analysis patterns



### Institutional Adaptability

Adaptable by other educational institutions with minor modifications



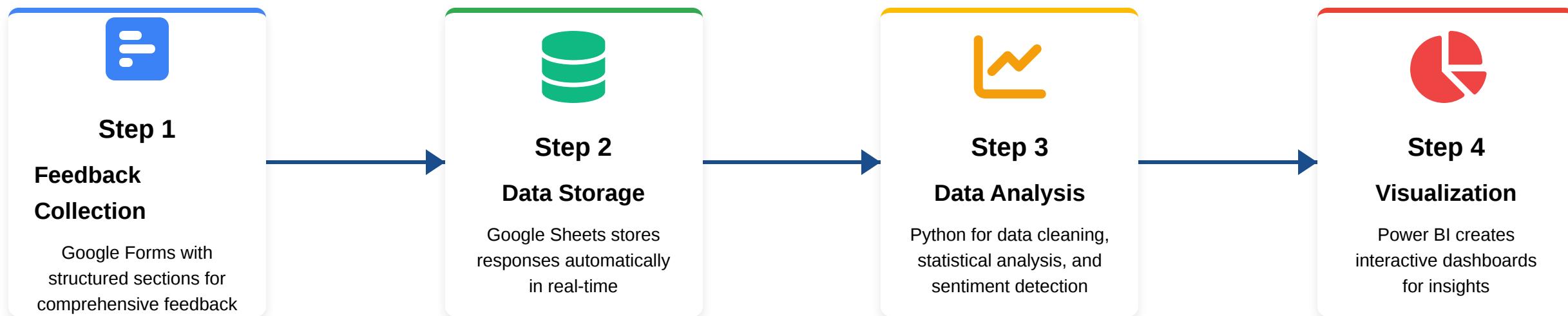
### Stakeholder Benefits

Faculty and administrators can identify strengths and improvement areas



# Methodology

Our feedback analysis system follows a streamlined four-step process to transform raw student feedback into actionable insights for decision-making.



**Google Forms**  
Student Information, Faculty Feedback, Facilities & Campus Feedback

**Google Sheets**  
Centralized Database, Automated Response Collection

**Python + Libraries**  
Pandas, Matplotlib, Seaborn, NLTK/TextBlob

**Power BI**  
Interactive Dashboards, KPIs, Drill-down Analysis



# Project Modules

The Student Feedback Analysis System is composed of 5 integrated modules:



## Student Module

- ✓ Anonymous feedback submission
- ✓ User-friendly Google Form interface
- ✓ Secure submission process



## Faculty Feedback

- ✓ Teaching quality assessment
- ✓ Knowledge & expertise evaluation
- ✓ Punctuality & interaction metrics



## Facilities Module

- ✓ Library services assessment
- ✓ Canteen & amenities feedback
- ✓ IT labs & cleanliness ratings



## Analysis Module

- ✓ Python data cleaning & validation
- ✓ Statistical analysis of responses
- ✓ Sentiment detection in comments



## Dashboard Module

- ✓ Interactive Power BI visualizations
- ✓ Drill-down analysis capabilities
- ✓ Management insights & reporting



# Expected Outcomes

The Student Feedback Analysis System will deliver the following key outcomes:



## User-Friendly Digital System

Easy-to-use interface with Google Forms for seamless feedback collection from students



## Real-Time Data Storage

Automatic storage of responses in Google Sheets for immediate access and reference



## Performance Reports

Detailed faculty-wise and facility-wise performance reports with trend analysis



## Strengths & Weaknesses

Clear identification of strengths and areas requiring improvement in teaching and infrastructure



## Professional Dashboards

Interactive Power BI dashboards with drill-down capabilities for management review



## Improved Decision-Making

Data-driven decisions leading to enhanced student satisfaction and educational quality



Collect



Process



Analyze



Act



Improvement

# Advantages of the System

Our Student Feedback Analysis System provides significant benefits over traditional methods:

## **Eliminates manual feedback collection**

No more paper forms, data entry, or physical storage requirements

## **Ensures confidentiality & unbiased responses**

Anonymous submissions encourage honest feedback from students

## **Easily scalable for any department**

Adaptable system that can grow with institutional needs

## **Combines simplicity with advanced analytics**

User-friendly Google Forms interface paired with powerful Python & Power BI analysis

## **Time-efficient & cost-effective**

Reduces administrative burden while providing deeper insights



### **Increased Efficiency**

Save time, reduce costs, and gain better insights



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# Technologies Used

Our feedback analysis system integrates these four powerful technologies to create a seamless end-to-end solution.



## Google Forms

User-friendly interface for structured feedback collection

- ✓ Customizable question formats
- ✓ Anonymous submissions
- ✓ Easy distribution via links/email



## Google Sheets

Real-time response storage and data management

- ✓ Automatic response collection
- ✓ Centralized database
- ✓ Real-time updates



## Python

Powerful data analysis and processing capabilities

- ✓ Pandas for data cleaning
- ✓ Statistical analysis with Matplotlib/Seaborn
- ✓ Sentiment detection with NLTK/TextBlob



## Power BI

Interactive dashboards for data visualization

- ✓ Interactive data exploration
- ✓ KPI cards and performance metrics
- ✓ Drill-down analysis capabilities

These technologies work together seamlessly to transform student feedback into actionable insights



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# System Requirements

The Student Feedback Analysis System is designed to be lightweight yet powerful, with the following minimum requirements for optimal performance.



## Hardware Requirements

- Processor:** Intel i3 or equivalent (minimum)
- RAM:** 4 GB (8 GB recommended)
- Storage:** 500 GB HDD or 256 GB SSD
- Internet:** Stable connection for Google Forms/Sheets



Any modern computer meets these requirements



## Software Requirements

- OS:** Windows 10/11, macOS, or Linux
- Browser:** Google Chrome/Edge
- Python:** 3.8+ with Pandas, Matplotlib, Seaborn, NLTK/TextBlob
- Power BI:** Desktop (latest version)
- Google Account:** For Forms and Sheets



All software is free to use or has free options



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# Features of the System

## Key Features of Student Feedback Analysis System



### User-Friendly Feedback Form

Easy-to-fill sections with intuitive interface



### Real-Time Data Storage

Instant responses in Google Sheets



### Data Cleaning & Validation

Automated duplicate removal and error detection



### Statistical Analysis

Averages, medians, trends, comparisons



### Sentiment Analysis

Detects positive/negative comments



### Interactive Dashboards

Filters, KPIs, and drill-down insights



### Confidentiality

Anonymous submissions for unbiased feedback



### Scalability

Multiple classes, semesters, faculties supported



### Decision Support

Data-driven actions for faculty and management



### Extensibility

Adaptable for monthly, semester-wise, or yearly reporting



# Conclusion

A smart, efficient, and modern feedback analysis system for educational institutions. Integrating Google Forms, Google Sheets, Python, and Power BI enables reliable collection, in-depth analysis, and professional dashboards. Facilitates data-driven continuous improvement in education quality and campus facilities.

## System Impact



### Enhanced Decision Making

Transforms raw feedback into actionable insights for faculty and administration



### Improved Student Experience

Addresses student concerns systematically leading to higher satisfaction



### Time & Resource Efficiency

Eliminates manual processes and automates data collection and analysis

## Long-Term Value



### Faculty Development

Provides objective data for continuous improvement of teaching methods



### Facilities Enhancement

Identifies infrastructure needs and prioritizes improvements



### Scalable & Adaptable

Grows with the institution and accommodates evolving educational needs

“ A data-driven approach to continuous educational improvement ”



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# Thank You

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## Questions & Discussion

We welcome your feedback and would be happy to address any questions about our Student Feedback Analysis System.



Data-Driven



User-Friendly



Modern



Scalable

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