Product Requirements and Specification Document

Project Name

EduDash - Student Performance KPI Dashboard

Description

EduDash is a Power BI dashboard designed to visualize key student performance indicators (KPIs) such as average grades, attendance rates, and subject-wise trends. The dashboard will provide interactive filters and conditional formatting to enable actionable insights for educators and researchers.

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1. Objectives

- Visualize core student performance KPIs.
- Enable data-driven insights for educators.
- Support filtering by class, subject, and time period.
- Highlight key trends and outliers using conditional formatting.

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2. Stakeholders

Role	Responsibility
Product Owner	Define requirements, approve deliverables
Developers	Implement Power BI dashboard
Educators	End users, provide feedback
Data Analysts	Prepare and validate data

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3. Functional Requirements

ID	Requirement
FR1	Display average grades per student, class, and subject
FR2	Show attendance rates per student, class, and subject
FR3	Visualize subject-wise performance trends over time
FR4	Provide interactive filters: class, subject, date range
FR5	Apply conditional formatting to highlight high/low performance and trends
FR6	Export dashboard visuals to PDF and Excel
FR7	Ensure responsive layout for desktop and tablet

4. Non-Functional Requirements

ID	Requirement
NFR1	Dashboard loads within 5 seconds
NFR2	Data refreshes daily
NFR3	Complies with institutional data privacy
NFR4	Accessible to users with basic Power BI skills

5. Data Requirements

Data Entity	Attributes
Student	ID, Name, Class, Enrollment Status
Subject	ID, Name, Teacher
Grade	Student ID, Subject ID, Date, Grade Value
Attendance	Student ID, Subject ID, Date, Status

- Data Source: Institutional student information system (CSV/Excel/Database)
- Data must be cleaned and validated before import.

6. Dashboard Specifications

6.1 Visual Components

Component	Type	Description
KPI Cards	Card	Avg. Grade, Attendance Rate
Subject Trend Chart	Line/Bar	Subject-wise grade trends over time
Attendance Heatmap	Matrix/Heat	Attendance by student and date
Filters	Slicer	Class, Subject, Date Range
Performance Table	Table	Student-level grades and attendance

6.2 Conditional Formatting

- Grades: Red (<60%), Yellow (60-80%), Green (>80%)
- Attendance: Red (<75%), Green (≥75%)
- Trend lines: Highlight significant increases/decreases

7. User Stories

ID	As a…	I want to…	So that…

US1	Educator	View average grades by class and subject	Identify students needing support
US2	Researcher	Analyze attendance trends over time	Correlate attendance with grades
US3	Admin	Export dashboard visuals	Share insights with stakeholders

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8. Acceptance Criteria

- Dashboard displays all specified KPIs and trends.
- Filters update visuals dynamically.
- Conditional formatting is applied as specified.
- Data is accurate and up-to-date.
- Dashboard is accessible and responsive.

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9. Implementation Plan

1. **Data Preparation**: Clean and structure data as per requirements.
2. **Power BI Setup**: Import data, define relationships, and create measures.
3. **Dashboard Design**: Build visuals, apply filters, and formatting.
4. **Testing**: Validate data accuracy, performance, and usability.
5. **Deployment**: Publish dashboard to Power BI Service.
6. **Feedback & Iteration**: Collect user feedback and refine as needed.

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10. Out of Scope

- Integration with external LMS or real-time data feeds
- Mobile app optimization
- Predictive analytics or AI-driven insights

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11. Risks & Mitigations

Risk	Mitigation
Incomplete data	Early data validation
User unfamiliarity with BI	Provide basic user guide
Data privacy concerns	Anonymize sensitive information

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12. Appendix

Technologies: Power BI, Excel/CSV, Institutional Database
Theme Tags: education, research, data-analytics

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