# Product Requirements and Specification Document (PRD)

## Project Name

**EduTrack - Student Performance Dashboard**

## Description

EduTrack is a Tableau dashboard designed to visualize student grades, attendance, and performance trends for an educational institution. The dashboard enables users to compare different classes or subjects using interactive parameters.

## 1. Objectives

| Objective | Description |
|-----------|-------------|
| Visualize Key Metrics | Display grades, attendance, and performance trends clearly |
| Enable Comparisons | Allow users to compare classes or subjects via parameters |
| Support Data-Driven Decisions | Facilitate insights for educators and administrators |
| Ensure Usability | Provide an intuitive, interactive dashboard experience |

## 2. Stakeholders

| Role | Responsibility |
|------|----------------|
| Product Owner | Define requirements, approve delivery |
| Developers | Implement Tableau dashboard |
| Data Analysts | Prepare and validate data |
| Educators/Admins | End users, provide feedback |

## 3. Functional Requirements

| ID | Requirement |
|----|-------------|
| FR1 | Import student data (grades, attendance, class/subject info) |
| FR2 | Display overall and individual student performance metrics |
| FR3 | Visualize attendance rates per class/subject |
| FR4 | Show performance trends over time (e.g., by term, month) |
| FR5 | Enable parameter-based comparison between classes or subjects |
| FR6 | Provide filtering by class, subject, date range, and student |

| | |
|---|---|
| FR7 | Allow export of dashboard views (PDF, image) |

## 4. Non-Functional Requirements

| ID | Requirement |
|---|---|
| NFR1 | Dashboard loads within 5 seconds |
| NFR2 | Compatible with Tableau Desktop and Server |
| NFR3 | Responsive layout for desktop and tablet |
| NFR4 | Data privacy: no personally identifiable info |

## 5. Data Requirements

| Data Element | Description |
|---|---|
| Student ID | Unique, anonymized identifier |
| Class/Subject | Name or code |
| Grade | Numeric or letter grade |
| Attendance | Present/absent status, date |
| Date | Date of record |

## 6. Dashboard Specifications

### 6.1 Layout

- **Header:** Institution name, dashboard title
- **Filters/Parameters:** Class, subject, date range, student
- **Main Visuals:**
    - Grades distribution (bar/box plot)
    - Attendance trend (line chart)
    - Performance over time (line/area chart)
    - Comparative view (side-by-side or overlay)
- **Export/Download Button**

### 6.2 Interactivity

- Dynamic filtering and parameter selection
- Hover tooltips for detailed data
- Drill-down to individual student or class level

## 7. User Stories

| ID | As a… | I want to… | So that… |
|---|---|---|---|
| US1 | Educator | View class performance trends | Identify areas needing attention |
| US2 | Administrator | Compare subjects using parameters | Allocate resources effectively |
| US3 | Data Analyst | Export dashboard views | Share insights with stakeholders |

## 8. Acceptance Criteria

- Dashboard displays grades, attendance, and trends for all classes/subjects
- Users can filter and compare data using parameters
- Visualizations update dynamically based on selections
- Data is anonymized and secure
- Export functionality works as specified

## 9. Technology Stack

| Component | Technology |
|---|---|
| Dashboard | Tableau |
| Data Source | CSV, Excel, or DB |
| Hosting | Tableau Server/Desktop |

## 10. Milestones

| Milestone | Target Date |
|---|---|
| Data Preparation | Week 1 |
| Initial Dashboard Design | Week 2 |
| Interactivity/Parameters | Week 3 |
| User Testing | Week 4 |
| Final Delivery | Week 5 |

## 11. Risks & Mitigations

| Risk | Mitigation |
|---|---|
| Incomplete data | Validate and clean data upfront |
| Performance issues | Optimize data extracts, visuals |
| User adoption | Provide training, documentation |

## 12. Appendix

### Sample Data Schema

```
StudentID | Class | Subject | Grade | Attendance | Date
----------------------------------------------------------
A001      | 10A   | Math    | 85    | Present    | 2024-01-10
A002      | 10A   | Math    | 78    | Absent     | 2024-01-10
...
```

**End of Document**