WINTER SEMESTER 2025-26

BCSE203E: Web Programming

Lab 7

Date: 07/01/2026

Reg. No: 24BCE5362

CODE:

index.html

```
<!DOCTYPE html>

<html lang="en">

<head>

   <meta charset="UTF-8">

   <title>Student Performance Analytics</title>



   <!-- Font Awesome -->

   <link rel="stylesheet"

       href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.7.0/css/font-awesome.min.css">



   <!-- External CSS -->

   <link rel="stylesheet" href="Lab7.css">

</head>



<body>
```

```
<div class="background-layer"></div>

<div class="layout">

  <!-- LEFT DASHBOARD MENU -->
  <div class="overlay">

    <h1>SPAS</h1>
    <h3>Student Performance<br>Analytics System</h3>
    <p>
      <b>Reg No:</b> 24BCE5362<br>
      <b>Date:</b> 07/01/2026
    </p>

    <div class="menu">

      <a href="index.html" class="menu-item">
        <i class="fa fa-home"></i> Home
      </a>

      <a href="upload.html" class="menu-item">
        <i class="fa fa-upload"></i> Upload Dataset
      </a>
```

```
        <a href="analytics.html" class="menu-item">
          <i class="fa fa-line-chart"></i> Analytics
        </a>

        <a href="clusters.html" class="menu-item">
          <i class="fa fa-users"></i> Student Clusters
        </a>

        <a href="contact.html" class="menu-item">
          <i class="fa fa-envelope"></i> Contact
        </a>

    </div>
</div>

<!-- RIGHT CONTENT AREA -->
<div class="content-card">

    <h2>About the System</h2>
    <p>
        The <b>Student Performance Decision Support System</b> is a web-based intelligent
        platform designed to help educators, administrators, and analysts understand,
        evaluate, and improve student academic performance using data science and
        machine learning techniques.
```

<h3>Core Purpose</h3>

The main goal of this system is to convert raw student data into

actionable insights. Instead of manual spreadsheets and static reports,

the system provides predictive analytics, clustering results, and visual summaries

to support data-driven decision making in education.

<h3>Key Objectives</h3>

Identify students who may be at academic risk

Discover hidden patterns in student performance

Analyze trends using statistical and ML models

Summarize textual feedback using sentiment analysis

Assist educators with visual dashboards

<h3>How the System Works</h3>

<h4>1. Data Preprocessing</h4>

Uploaded datasets are cleaned and prepared by handling missing values,

normalizing features, and structuring the data for analysis.

<h4>2. Machine Learning Analysis</h4>

The system applies supervised learning for prediction and unsupervised learning for clustering students based on similar academic patterns.

<h4>3. Visualization & Insights</h4>

Results are displayed using charts, graphs, and cluster views that allow educators to easily interpret student performance.

<h3>What Users Can Do</h3>

Upload student datasets (CSV format)

View analytical dashboards

Explore student clusters

Analyze academic trends

Make informed academic decisions


```
      <h3>Technologies Used</h3>
      <ul>
        <li><b>Frontend:</b> HTML, CSS, JavaScript</li>
        <li><b>Analytics:</b> Python, Pandas, NumPy, scikit-learn</li>
        <li><b>Visualization:</b> Charts and dashboards</li>
        <li><b>Database:</b> SQL-based storage</li>
      </ul>

      <p>
        This platform bridges the gap between raw academic data and intelligent
        decision making, helping institutions improve student outcomes effectively.
      </p>

    </div>

</div>

</body>
</html>
```

upload.html

```
<!DOCTYPE html>
<html>
<head>
  <title>Upload Dataset</title>
```

```
    <link rel="stylesheet" href="Lab7.css">
</head>
<body>

<div class="background-layer"></div>

<div class="overlay">
    <h1>Upload Dataset</h1>
    <p>Upload student performance data here.</p>

    <a href="index.html" class="menu-item">⬅ Back to Home</a>
</div>

</body>
</html>
```

analytics.html

```
<!DOCTYPE html>
<html>
<head>
    <title>Analytics</title>
    <link rel="stylesheet" href="Lab7.css">
</head>
<body>
```

```
<div class="background-layer"></div>

<div class="overlay">
    <h1>Analytics</h1>
    <p>Analyze student performance metrics.</p>

    <a href="index.html" class="menu-item">⬅ Back to Home</a>
</div>

</body>
</html>
```

clusters.html

```
<!DOCTYPE html>
<html>
<head>
    <title>Student Clusters</title>
    <link rel="stylesheet" href="Lab7.css">
</head>
<body>

<div class="background-layer"></div>

<div class="overlay">
```

```
    <h1>Student Clusters</h1>
    <p>View grouped student performance clusters.</p>

    <a href="index.html" class="menu-item">⬅ Back to Home</a>
</div>

</body>
</html>
```

contact.html

```
<!DOCTYPE html>
<html>
<head>
    <title>Contact</title>
    <link rel="stylesheet" href="Lab7.css">
</head>
<body>

<div class="background-layer"></div>

<div class="overlay">
    <h1>Contact</h1>
    <p>Email: analytics@college.edu</p>
```

```
    <a href="index.html" class="menu-item">⬅ Back to Home</a>
</div>


</body>
</html>
```

Lab7.css

```
* {
    box-sizing: border-box;
    margin: 0;
    padding: 0;
}

body {
    font-family: "Segoe UI", Arial, Helvetica, sans-serif;
    padding: 40px;
    background: #f5f7fb;
}

.background-layer {
    position: fixed;
    inset: 0;
    background-image: url("https://images.unsplash.com/photo-1666875753105-
c63a6f3bdc86?fm=jpg&q=60&w=3000");
    background-size: cover;
```

```
    background-position: center;
    filter: blur(2px) brightness(0.9);
    z-index: -1;
}

.layout {
    display: flex;
    gap: 40px;
    align-items: flex-start;
}

.overlay {
    width: 360px;
    background: linear-gradient(
        180deg,
        rgba(245,248,255,0.96),
        rgba(235,240,255,0.96)
    );
    padding: 30px;
    border-radius: 18px;
    box-shadow:
        0 20px 40px rgba(0,0,0,0.12),
        inset 0 0 0 1px rgba(37,99,235,0.08);
}
```

```
h1 {
    font-size: 28px;
    margin-bottom: 8px;
}

h1::after {
    content: "";
    display: block;
    width: 70px;
    height: 3px;
    background: linear-gradient(to right, #1e90ff, #6f42c1);
    margin-top: 6px;
}

h1::first-letter {
    font-size: 40px;
    color: #1e90ff;
}

h2, h3, h4 {
    margin-top: 20px;
    margin-bottom: 10px;
    color: #1f2937;
```

```
}

p {
    color: #444;
    font-size: 15px;
    line-height: 1.7;
    margin-bottom: 14px;
}

ul {
    margin-left: 20px;
    margin-bottom: 20px;
}

li {
    margin-bottom: 8px;
}

.menu {
    margin-top: 25px;
}

.menu-item {
    display: block;
```

```
    text-decoration: none;
    color: #1f2937;
    padding: 14px 16px;
    margin-bottom: 14px;
    border-radius: 12px;
    background: #ffffff;
    border: 1px solid #e5e7eb;
    position: relative;
    transition: all 0.3s ease;
    font-weight: 500;
}

.menu-item i {
    color: #2563eb;
    margin-right: 12px;
}

.menu-item:hover {
    background: linear-gradient(to right, #e0edff, #f3e8ff);
    transform: translateX(6px);
    box-shadow: 0 10px 20px rgba(0,0,0,0.12);
}

.menu-item:active {
```

```
    transform: scale(0.96);
}

.menu-item:focus {
    outline: 2px solid #2563eb;
}

.menu-item::before {
    content: "➜";
    position: absolute;
    left: -22px;
    top: 50%;
    transform: translateY(-50%);
    opacity: 0;
    color: #2563eb;
    font-size: 16px;
}

.menu-item:hover::before {
    opacity: 1;
}

.content-card {
    background: rgba(255,255,255,0.98);
```

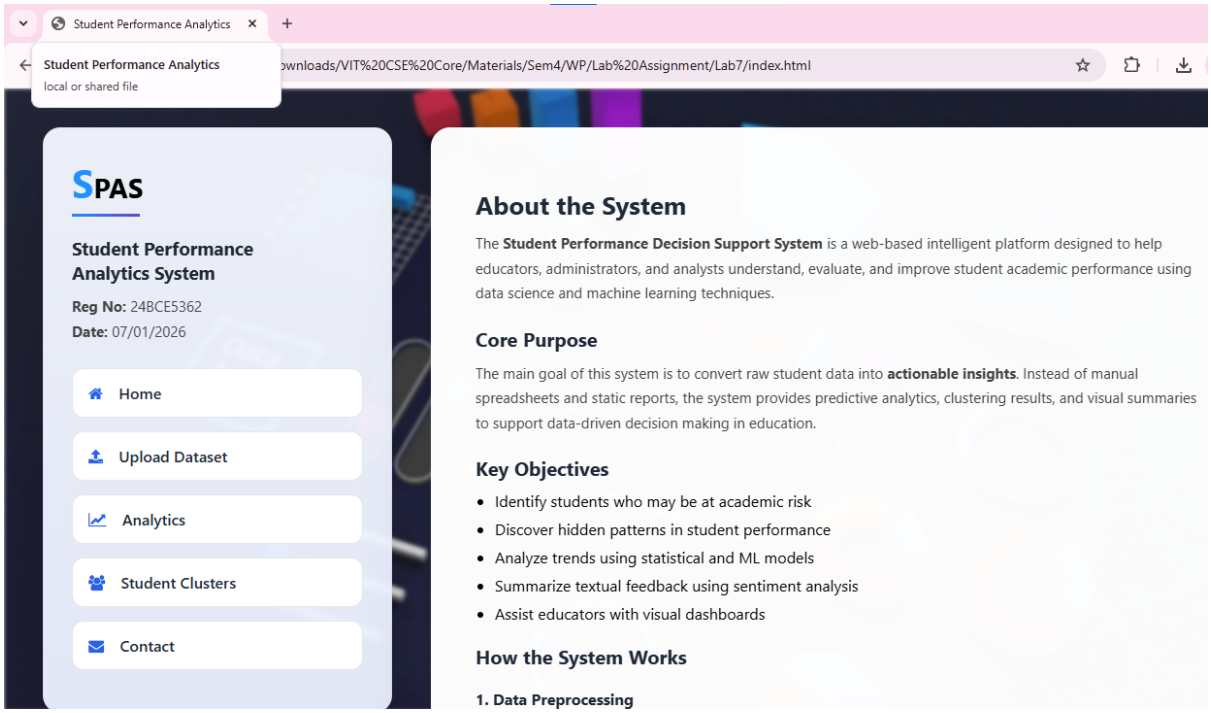
```
    padding: 42px 46px;
    border-radius: 20px;
    box-shadow: 0 30px 60px rgba(0,0,0,0.18);
    max-width: 880px;
}

.content-card h2 {
    font-size: 26px;
}

.content-card h3 {
    font-size: 20px;
}

.content-card p {
    max-width: 760px;
}
```

Output:


Student Performance Analytics
Student Performance Analytics
local or shared file
wnloads/VIT%20CSE%20Core/Materials/Sem4/WP/Lab%20Assignment/Lab7/index.html
SPAS
Student Performance Analytics System
Reg No: 24BCE5362
Date: 07/01/2026
Home
Upload Dataset
Analytics
Student Clusters
Contact
About the System
The Student Performance Decision Support System is a web-based intelligent platform designed to help educators, administrators, and analysts understand, evaluate, and improve student academic performance using data science and machine learning techniques.
Core Purpose
The main goal of this system is to convert raw student data into actionable insights. Instead of manual spreadsheets and static reports, the system provides predictive analytics, clustering results, and visual summaries to support data-driven decision making in education.
Key Objectives
Identify students who may be at academic risk
Discover hidden patterns in student performance
Analyze trends using statistical and ML models
Summarize textual feedback using sentiment analysis
Assist educators with visual dashboards
How the System Works
1. Data Preprocessing


Data Analytics
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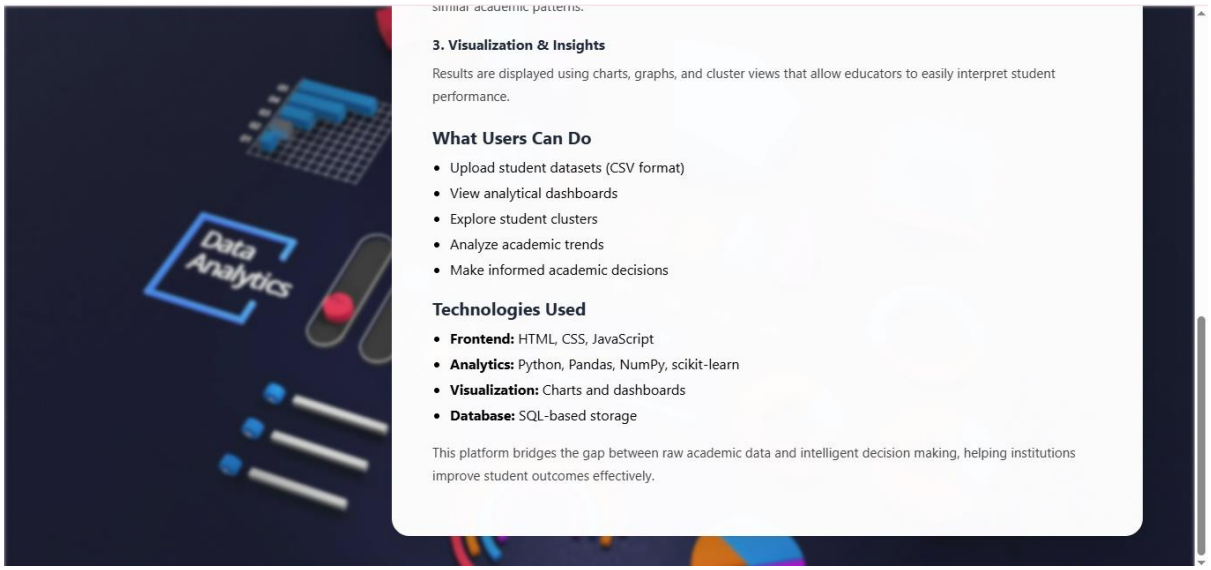
Uploaded datasets are cleaned and prepared by handling missing values, normalizing features, and structuring the data for analysis.
2. Machine Learning Analysis
The system applies supervised learning for prediction and unsupervised learning for clustering students based on similar academic patterns.
3. Visualization & Insights
Results are displayed using charts, graphs, and cluster views that allow educators to easily interpret student performance.
What Users Can Do
Upload student datasets (CSV format)
View analytical dashboards
Explore student clusters
Analyze academic trends
Make informed academic decisions
Technologies Used
Frontend: HTML, CSS, JavaScript
Analytics: Python, Pandas, NumPy, scikit-learn
Visualization: Charts and dashboards


similar academic patterns.
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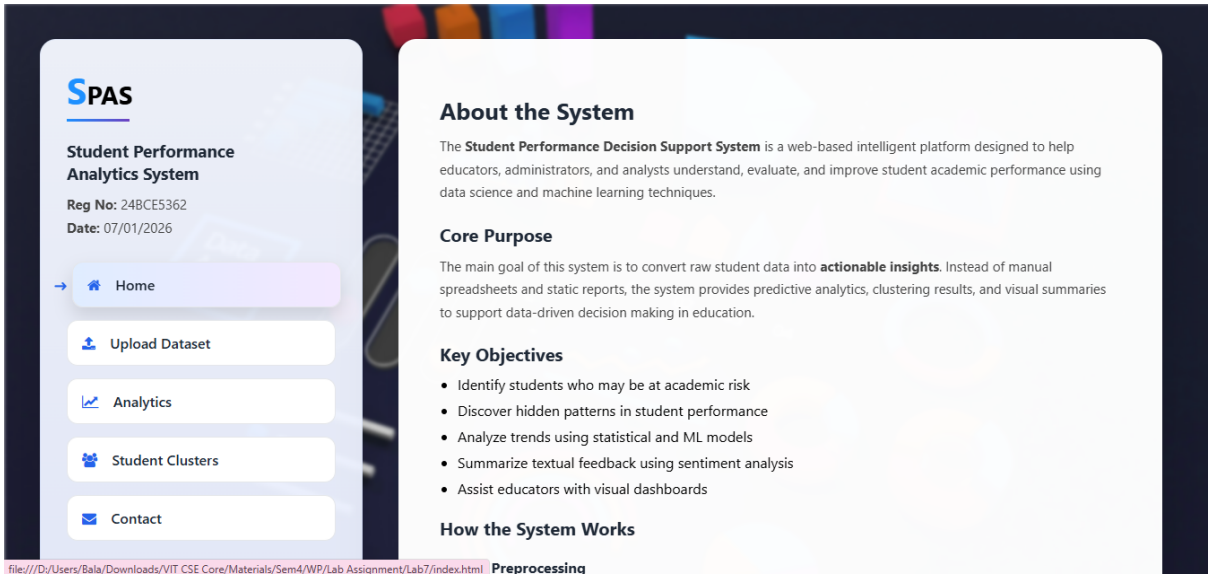
Data Analytics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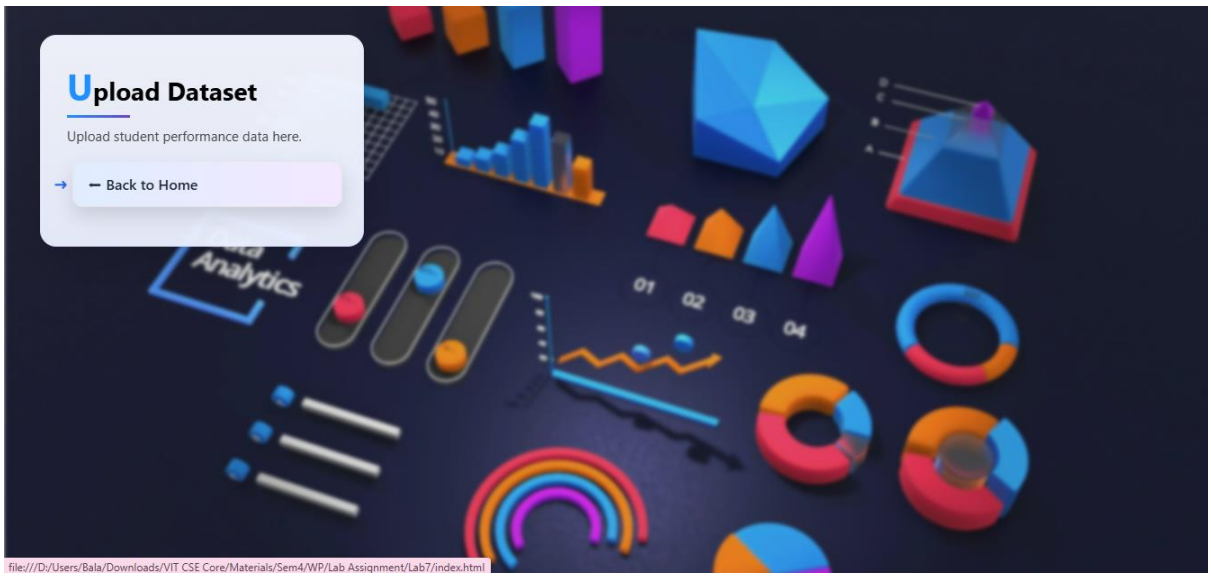
Preprocessing
file:///D:/Users/Bala/Downloads/VIT CSE Core/Materials/Sem4/WP/Lab Assignment/Lab7/index.html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Upload student performance data here.
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01
02
03
04
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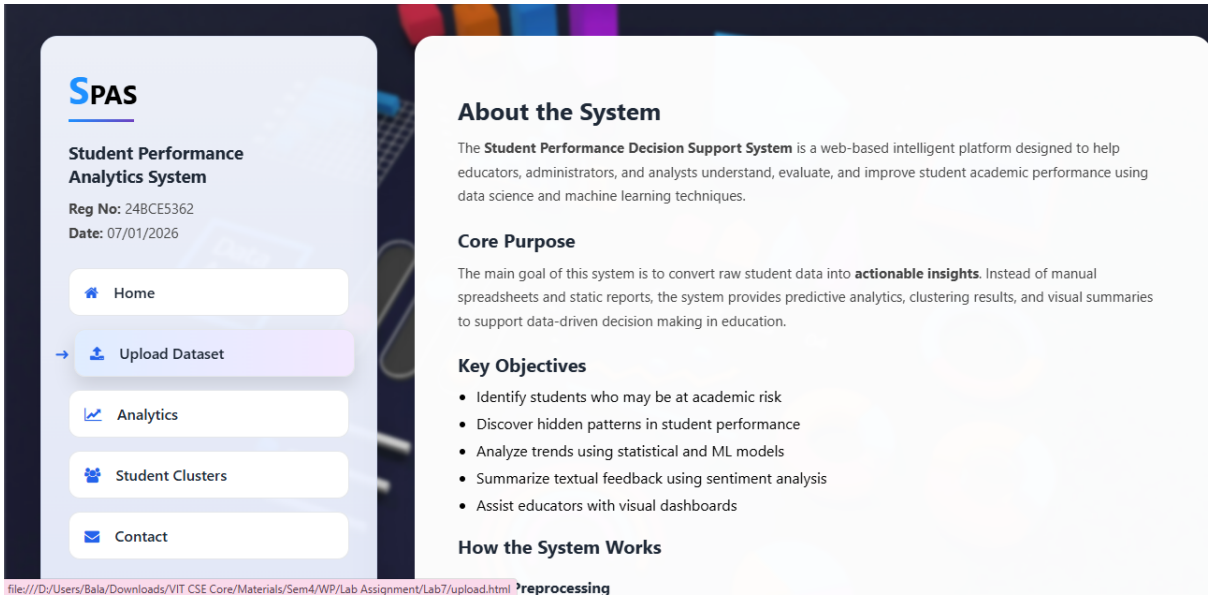
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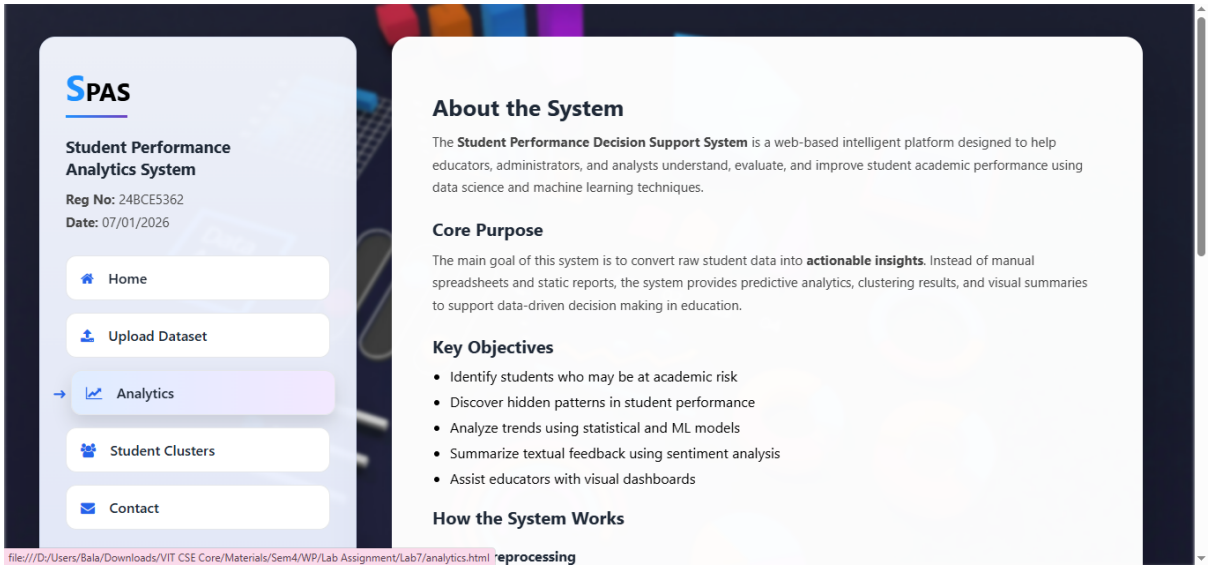
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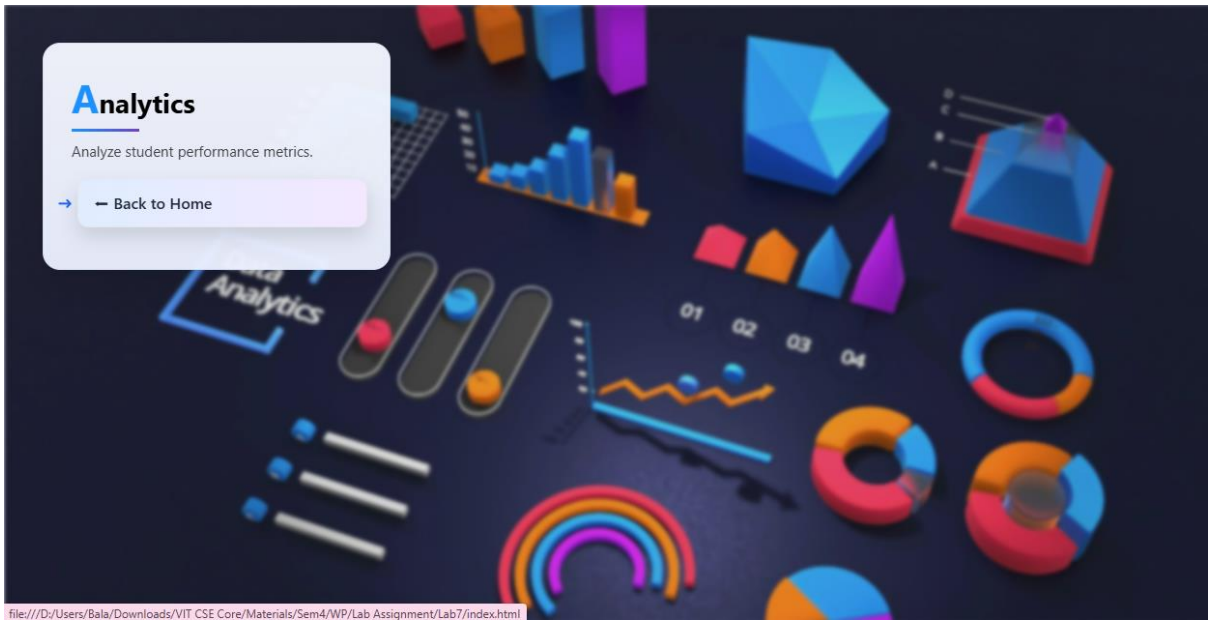
file:///D:/Users/Bala/Downloads/VIT CSE Core/Materials/Sem4/WP/Lab Assignment/Lab7/analytics.html


Analytics
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02
03
04
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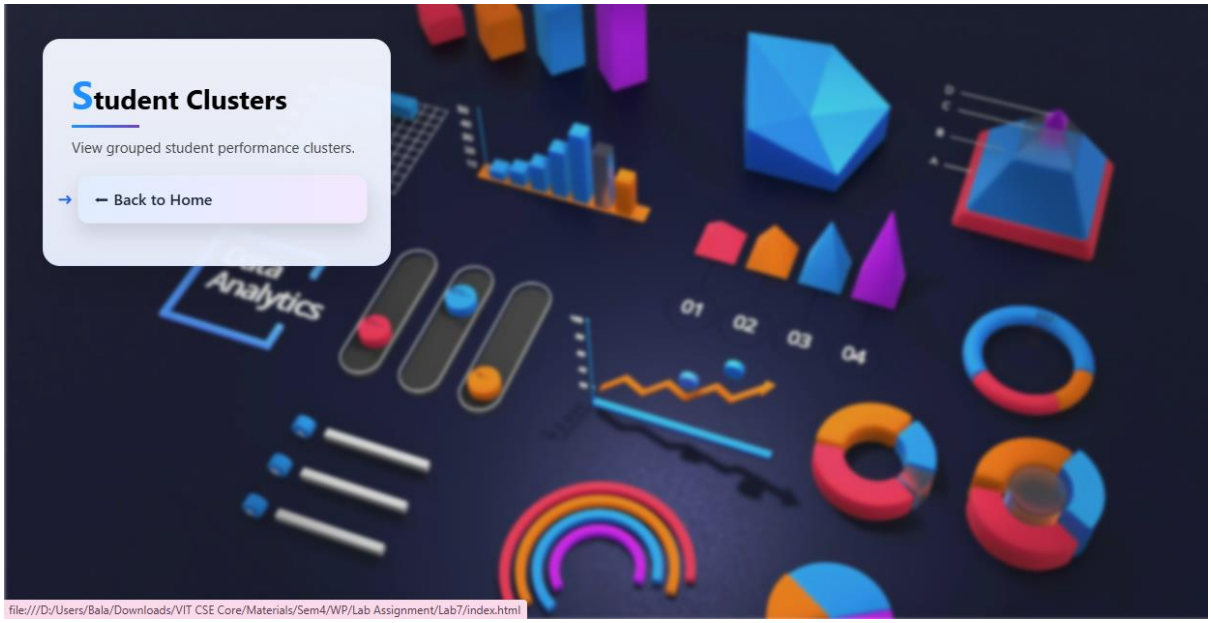
Student Clusters
View grouped student performance clusters.
← Back to Home
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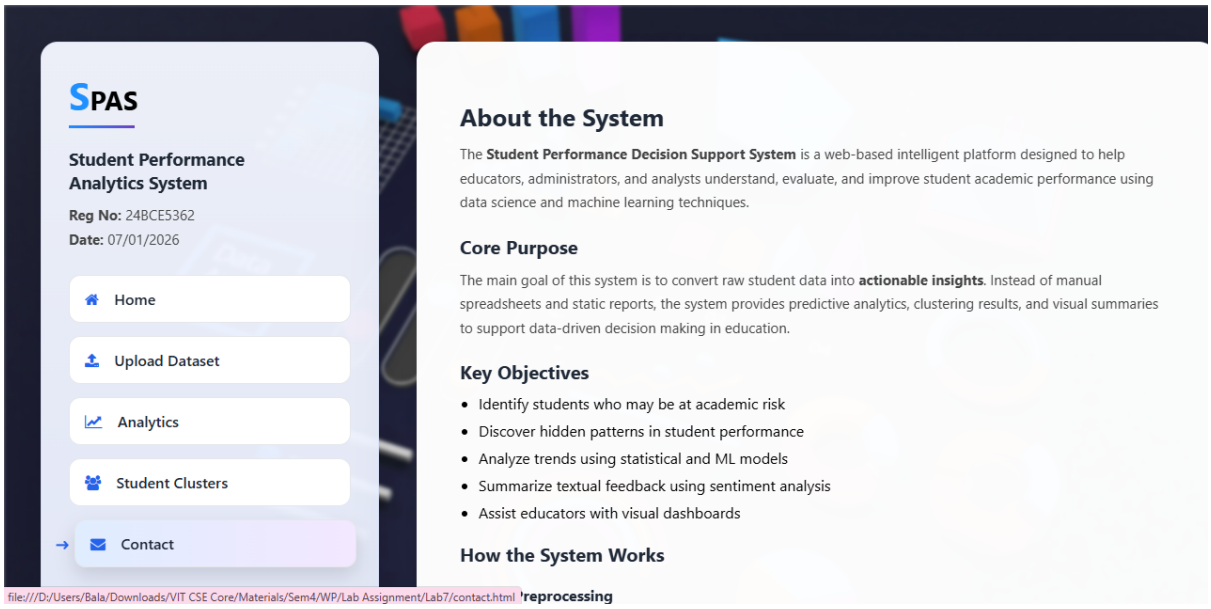
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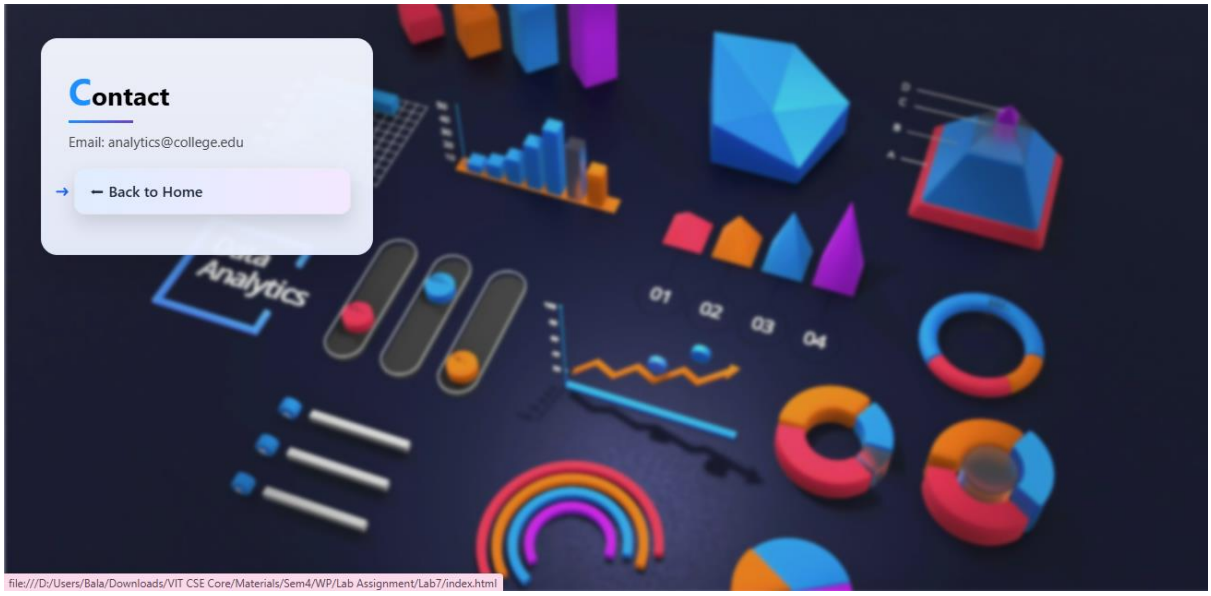
'reprocessing


Contact
Email: analytics@college.edu
Back to Home
Analytics
01
02
03
04
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