
Force-Directed Network Graph Documentation

Overview

The HTML file generates a force-directed network graph using the D3.js library. The graph visualizes the relationship between students and their departments based on their financial status, gender, and other attributes.

File Structure

- **index.html**: HTML file containing the code for the force-directed network graph.
- **Student_Attitude_and_Behavior.csv**: CSV file containing the data used for generating the network graph.

Dependencies

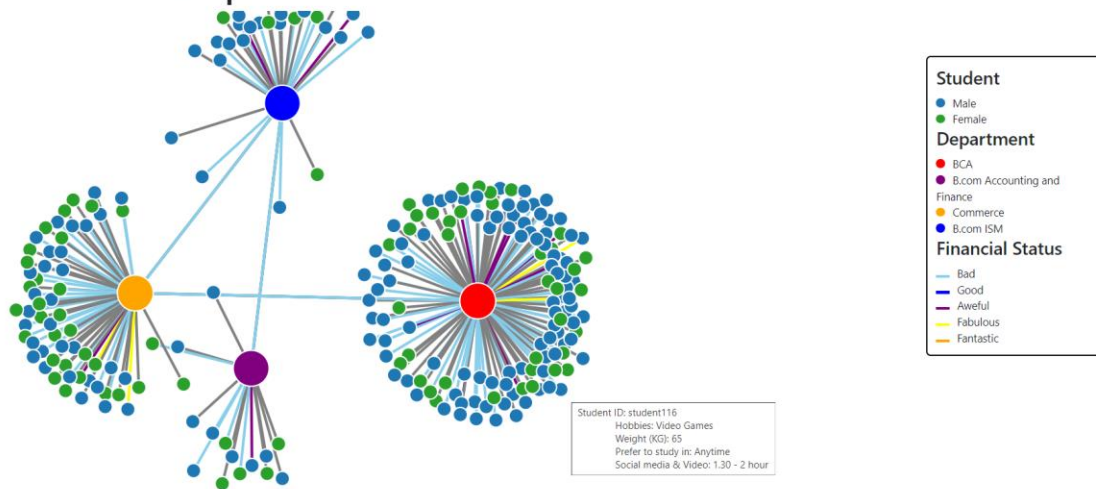
- **D3.js v7**: JavaScript library for manipulating documents based on data.
- **Bootstrap v4.5.2**: CSS framework for styling the HTML elements.

Data

- **Student_Attitude_and_Behavior.csv**: CSV file containing the following attributes:
 - **Gender**: Gender of the student (Male/Female).
 - **Department**: Department of the student (e.g., BCA, B.com Accounting and Finance, Commerce, B.com ISM).
 - **Financial Status**: Financial status of the student (e.g., Bad, Good, Awful, Fabulous, Fantastic).
 - **Hobbies**: Hobbies of the student.
 - **Weight(KG)**: Weight of the student in kilograms.
 - **prefer to study in**: Student's preferred study environment.
 - **social media & video**: Student's social media and video habits.

Visualization

Force Network Graph



- The force-directed network graph visualizes the relationship between students and their departments.
- Nodes represent either departments or students.
 - Department Nodes:** Represent different departments and are colored based on departmental affiliations.
 - BCA: Red
 - B.com Accounting and Finance: Purple
 - Commerce: Orange
 - B.com ISM: Blue
 - Student Nodes:** Represent individual students and are colored based on gender.
 - Male: Blue
 - Female: Green
- Links represent connections between students and departments, with the color indicating the financial status of the student.
 - Bad: Skyblue
 - Good: Blue
 - Awful: Purple
 - Fabulous: Yellow
 - Fantastic: Orange

Features

- Node Interaction:**

- Nodes can be dragged across the visualization.
- Tooltip displays detailed information about each student on hover.

- **Tooltip Content:**

- **Student ID:** Unique identifier for the student.
- **Gender:** Gender of the student.
- **Department:** Department of the student.
- **Hobbies:** Hobbies of the student.
- **Weight (KG):** Weight of the student in kilograms.
- **Preferred Study Environment:** Student's preferred study environment.
- **Social Media & Video Habits:** Student's social media and video habits.

- **Draggable Nodes:** Nodes can be dragged across the visualization to improve visualization.

Legend

- **Student Gender:**

- Male: Blue
- Female: Green

- **Department:**

- BCA: Red
- B.com Accounting and Finance: Purple
- Commerce: Orange
- B.com ISM: Blue

- **Financial Status:**

- Bad (Skyblue): Indicates a bad financial status.
- Good (Blue): Indicates a good financial status.
- Awful (Purple): Indicates an awful financial status.
- Fabulous (Yellow): Indicates a fabulous financial status.
- Fantastic (Orange): Indicates a fantastic financial status.

Usage

1. Ensure that the **Student_Attitude_and_Behavior.csv** file is in the same directory as the HTML file.
2. Open **index.html** in a web browser to view the force-directed network graph.