Career Navigator: An Interactive Career and Major Exploration Platform

Contenu Multimedia

Submitted by: Mouhcen Laalaoui - Groupe:02

Date: Apr 26, 2025

1. Abstract

This project presents a dynamic, user-friendly web application designed to guide students and individuals in exploring academic majors and associated career paths. Utilizing client-side JavaScript and modern DOM manipulation techniques, the application offers a seamless, animated interface that enables users to select a field of study, examine detailed job profiles, and understand the skills, educational requirements, and potential career outcomes. The solution integrates interactivity, modular design, and scalable architecture to deliver an engaging educational tool that supports career decision-making.

2. Introduction

Choosing a suitable academic major and career path is a critical decision that impacts ones future trajectory. Many students lack access to clear, interactive resources that demystify this process. This project addresses this need by building an intuitive, visually appealing web platform that enables users to:

- Browse various academic majors.

- Explore corresponding career paths.

- Delve into job-specific details such as salary, growth, skills, and educational requirements.

3. Objectives

The primary objectives of this project are:

- To create a responsive, section-based web application that supports navigation between introductory, major selection, and job detail interfaces.

- To dynamically populate content using pre-defined JavaScript objects (majorsData, jobDetailsData).

- To enhance user engagement through animations and interactive design.

- To support scalability and maintainability through modular event handling and clean UI transitions.

4. Methodology

4.1 Frontend Technologies

- **HTML/CSS**: Structured content and visual layout.

- **JavaScript (Vanilla)**: Core scripting language for interactivity.

4.2 Key Features Implemented

- **Dynamic Section Switching**: Handled by the switchSection() function to provide smooth navigation between UI stages.

- **Event-Driven Interactions**: Event listeners on buttons and cards to trigger content changes and transitions.

- **Data-Driven Rendering**: Uses JavaScript objects (e.g., majorsData, jobDetailsData) to dynamically render major and job information.

- **Back Navigation**: Allows users to return to previous sections via .back-button class detection.

- **Scroll-Based Animations**: Implemented using the Intersection Observer API for a visually engaging experience.

4.3 Logical Structure

- DOMContentLoaded listener initializes all functionality.

- displayMajorDetails() and displayJobDetails() dynamically insert HTML content based on user interaction.

- Responsive and modular card-based layout enhances usability across devices.

5. Results

The application successfully provides a multi-section UI allowing users to:

- Start with an introduction.

- Select from multiple academic majors.

- View video and textual information about the major.

- Explore multiple career options related to the major.

- Deep dive into job roles including skills, education, work-life balance, and potential employers.

The use of animated transitions and scroll-triggered animations enhances the user experience, making the platform both educational and engaging.

6. Conclusion

This interactive web application represents a valuable academic support tool that helps learners understand the relationship between academic majors and career possibilities. It emphasizes user experience, data-driven content generation, and clean UI logic. The project demonstrates practical frontend development skills and thoughtful application design that can be extended or adapted for broader educational contexts.

7. Future Work

Future enhancements for the platform include:

- Integration with a backend or database (e.g., Firebase) for real-time updates and personalization.

- Addition of filtering/searching capabilities for faster navigation.

- User account support to save preferences and track viewed jobs.

- Localization and accessibility improvements.