

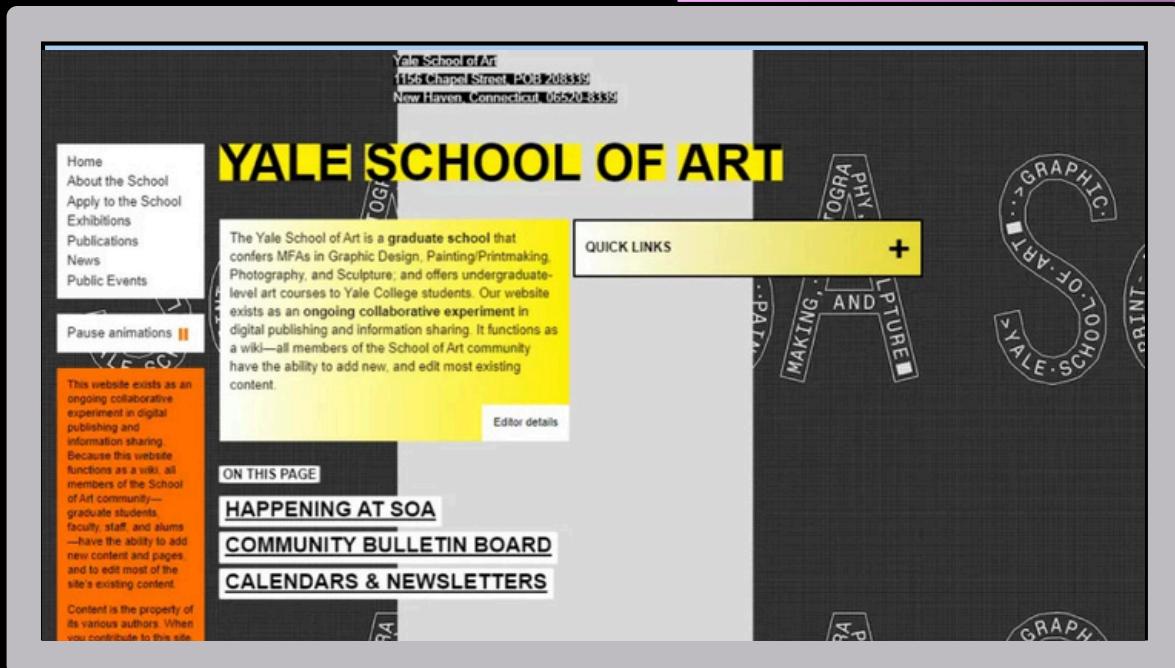
Automatic Modernization of HTML Pages

Enhancing Web Design and Accessibility with Appian Website Builder



CHALLENGES IN USER-GENERATED WEBSITES

Example of a poor HTML structure



User-generated websites often:

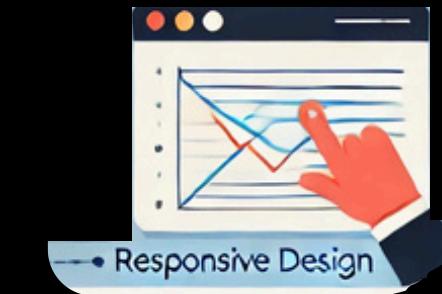
1. Lack of aesthetic consistency and visual appeal.
2. Struggle with accessibility features (e.g., screen readers, contrast).
3. Use poor HTML structures, making them hard to maintain.
4. Fail to adapt to mobile and different screen sizes (no responsiveness).
5. How can we efficiently manage and update editable data on the website?

Result:

1. Users blame the tool rather than their design choices.
2. Websites fail to meet evolving design and usability trends, leading to outdated experiences.



MODERNIZATION GOALS: A NEW ERA OF WEB DEVELOPMENT

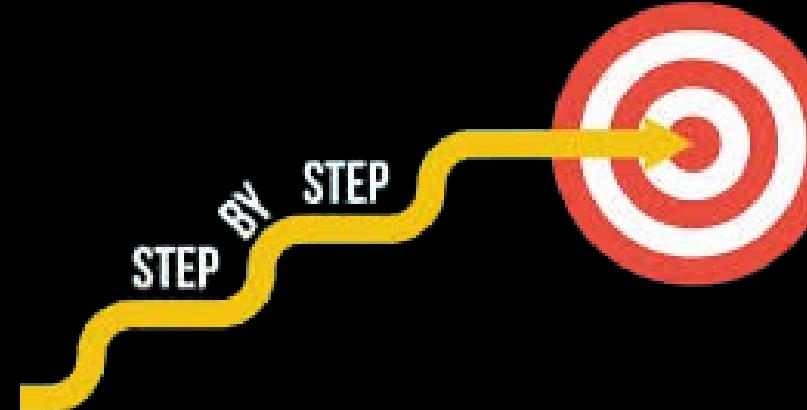


Improve the quality of user-generated websites by:

1. Enhancing visual appeal through consistent fonts, color schemes, and optimized spacing.
2. Ensuring compliance with accessibility standards for inclusive design.
3. Promoting semantic HTML to improve SEO and facilitate easier maintenance.
4. Implementing responsive designs to ensure compatibility across devices.
5. Incorporating user feedback to drive continuous improvement and adaptability.
6. Aligning websites with modern web design trends and best practices.
7. Ensuring user-friendly interfaces that guide and empower users.

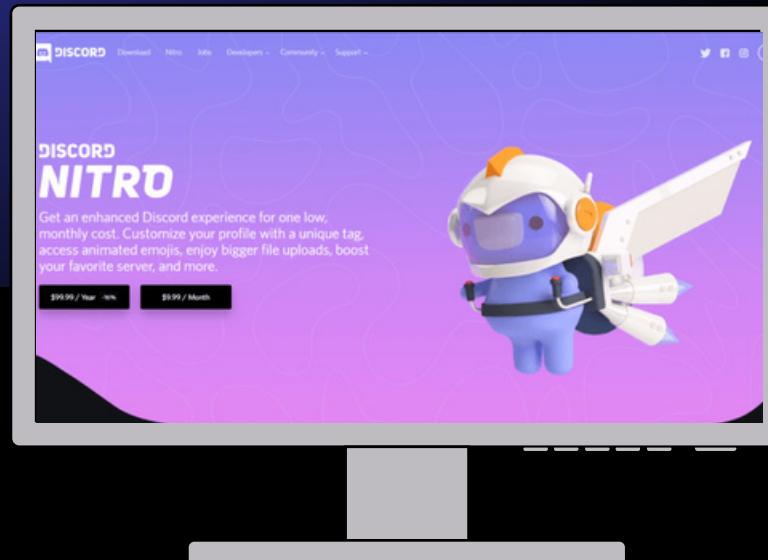


APPROACH TO MODERNIZATION

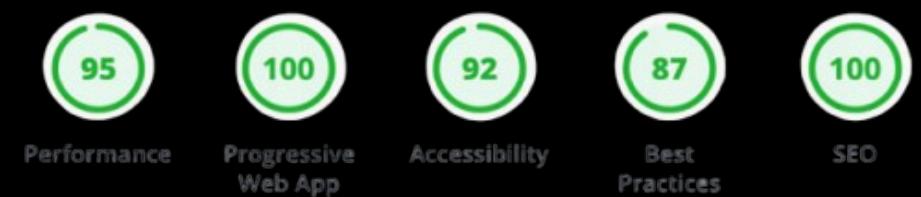


1. Automate modernization using built-in tools:
 - a. **Google Lighthouse**: Automated auditing tool for performance, accessibility, and best practices.
 - b. **WAVE Accessibility Tool**: Helps identify and fix accessibility issues.
 - c. **Bootstrap Components**: Use Bootstrap components for responsiveness and structured design, leveraging predefined frameworks.
2. Offer users choices to preview, customize, and accept changes.
3. Focus on maintaining user creativity while improving website quality.
4. Use AI to generate website images based on business details, enhancing visual appeal and ensuring accurate data formatting.
5. Implement modular suggestions for users to apply enhancements incrementally.

modern HTML structure

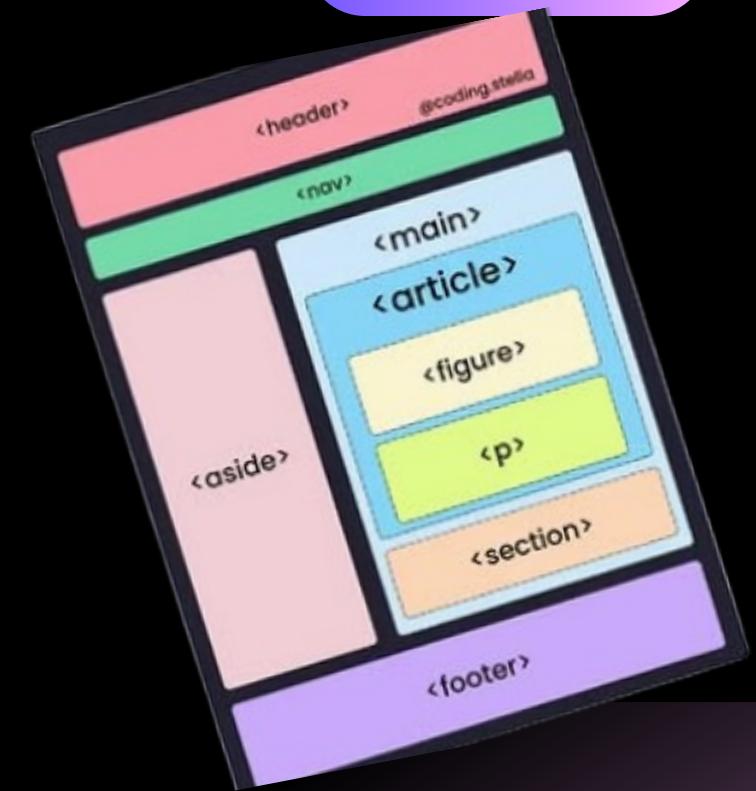


Google
Lighthouse



COMPONENTS OF THE SOLUTION

- 1. Modern Design:** Consistent fonts, colors, padding, and margins.
- 2. Accessibility Features:** Screen reader compatibility and keyboard navigation.
- 3. Semantic HTML:** Use of proper tags like <header>, <article>, <section>.
- 4. Responsive Design:** Adaptive layouts with CSS media queries.
- 5. User-Centric Customization:** Preview and selective acceptance of changes.

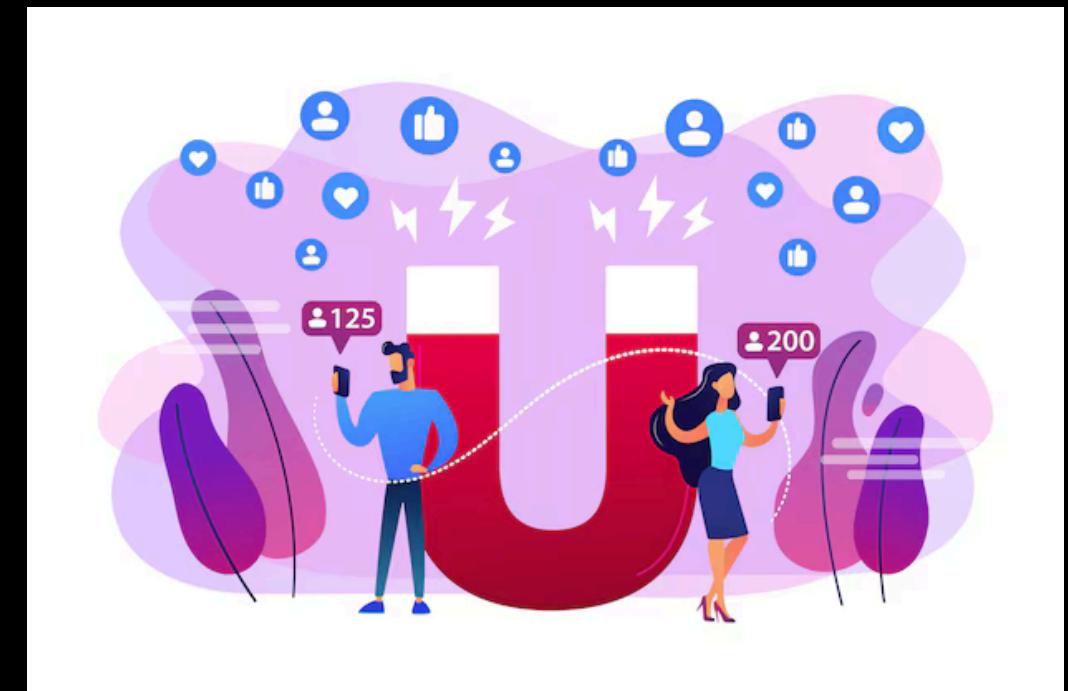


BENEFITS OF MODERNIZED WEBSITES

- Aesthetic Appeal:** Uniform, visually attractive designs increase user retention.
- Accessibility Compliance:** Inclusive design ensures usability for all audiences.
- Improved Performance:** Faster load times and better mobile adaptability.
- User Empowerment:** Creative freedom is preserved while improving website quality.

Quantitative Impact:

- Websites see up to a 25% increase in traffic and engagement.
- Accessibility compliance reduces potential legal risks.



CUSTOMER
GROWTH



FUTURE ENHANCEMENTS

- AI Integration:** Personalized design recommendations based on user data.
- Advanced Accessibility Tools:** Real-time feedback for accessibility issues.
- User Feedback Loop:** Analytics will refine design suggestions further.
- Scalability:** Extend functionality for larger enterprises and diverse use cases.



REAL-TIME FEEDBACK



Thank You



24f2002281@ds.study.iitm.ac.in
24f2008755@ds.study.iitm.ac.in