Automatic Website Generator Using AI to Generate Stunning Websites Instantly

Siddhi Vinchurkar[1], Dhruvi Sarkale[2], Shraddha Zade[3], Shivam Rapartiwar[4], Priyanka More[5]

U.G. Student, Department of Computer Engineering, VIIT Engineering College, Kondhwa, Pune, India[1]

Associate Professor, Department of Computer Engineering, VIIT Engineering College, Kondhwa, Pune, India[2]

ABSTRACT: Now-a-days creating a website with the help of web designers is a tedious job. It takes a huge amount of time and resources and may not provide desirable results.However using AI and web technology user can be delivered with superior experience and personalized services in easy manner. Instead of designer deciding on layout,colour,photos and photo sizes,the software platform automatically analyses and recommends design elements to the user. It also provides some advance functions to utilize the information value of the data collected within the presented system.

KEYWORDS: Database, Server,Suggestions, Supervised Learning, Templates,Web Development.

I. INTRODUCTION

Motivation: The existing technology for website creation includesdrag and drop which is tedious to implement. The websites created may have a buggy interface. There is no control over the design and if one doesn't like the layout, one has to start all over again which can be time consuming. In this process more efforts and time are required. So we are providing a platform which will ease the process of website creation.

Basic Idea: This project will help to build fully automated websites only by taking user input.Based on previous user input, the user will get suitable recommendations. From the suggested recommendations, the user can select any of the websites and publish it.This will enable the user to build websites with minimal efforts.

II. RELATED WORK

DrawbacksofExistingAlgorithms:

Wix: Wix paid plans start at a high price, but even the starter plan does not removeWixads from your site.UsingWixfor more than a few months, they are going to be a much pricier option than other site builders or buying your own shared hosting.The editing and page layout process also has a few intangibles missing. You can drag and drop anywhere. This can be good from a control standpoint, but it can also be frustrating based on expectations. We cannot pick a different theme once you have made your initial choice.

Grid: The Grid has an unpolished and sometimes buggy user interface. The Grid produces poorly designed websites by default, with a few exceptions that can be described as mediocre at best. All the websites produced by The Grid seem to bear similarities. You have almost no control over the design of the website. And if you don't like the design, you will have to start all over again.

III. PROPOSED SYSTEM

The aim here is to develop a system to recognizeuser inputs correctly and generate different templates for the pages that will be included in the website which will provide best suited or optimal pages required for the website.

A. *Proposed System Modules:*

1. After visiting the website the user first needs to sign up. Then user input is taken by asking a few questions. A website is generated based on these inputs. The modules of the website can be considered as navigation bar, about us or services, team or testimonials and footer.

2. After the website is generated if the user is not satisfied with any of the module, appropriate suggestions are provided which can be selected. Once this is done the user can also edit or delete the content on the website or change the images according to his need.

3. After everything gets selected the final website gets generated.

B. *Description of the Proposed Algorithm:*

Genetic algorithm:

A genetic algorithm is a search heuristic algorithm. This algorithm reflects the process of natural selection where the fittest individuals are selected for reproduction in order to produce offspring of the next generation.It can search through different combinations of designs to find the perfect combination of both which could result in a better final product.They can also be used to solve other optimization problems.

The basic process for a genetic algorithm is:

- Initialization: In this system, the initial population is considered to be the modules of the templates such as navigation bar, footer etc. This population is usually randomly generated and can be any desired size, from only a few individuals to thousands.

- Evaluation: Each member of the population is then evaluated and we calculate a 'fitness' for that individual. The fitness value is calculated by how well it fits with our desired requirements

- Selection: Selection helps us to do this by discarding the bad designs and only keeping the best individuals in the population. There are a few different selection methods but the basic idea is the same, make it more likely that fitter individuals will be selected for our next generation.

- Crossover: During crossover we create new individuals by combining aspects of our selected individuals. In this we combine certain traits from two or more individuals we will create an even 'fitter' offspring which will inherit the best traits from each of its parents.

- Mutation: A little bit of randomness is added in population's genetics otherwise every combination of solutions would create initial population. Mutation typically works by making very small changes at random to an individual's genome.
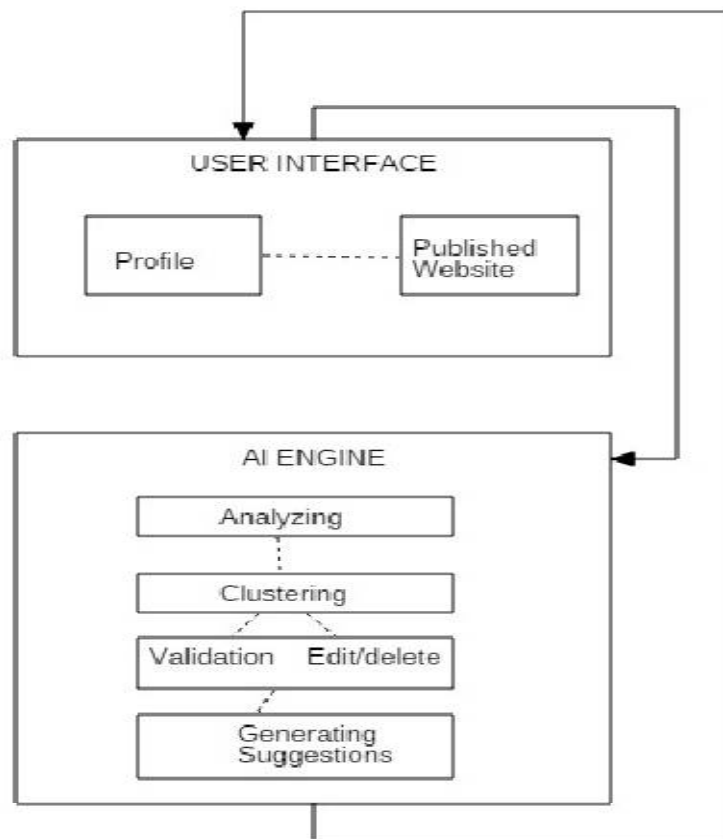
C. *Architectural Design*:

Fig1: Architectural Design.

IV. **PSEUDO CODE**

(1) initialise population;
(2) evaluate population;
(3) **while** (*!stopCondition*) **do**
(4)   select the best-fit individuals for reproduction;
(5)   breed new individuals through crossover and mutation operations;
(6)   evaluate the individual fitness of new individuals;
(7)   replace least-fit population with new individuals;

Fig2:Pseudo Code for Genetic Algorithm.

V. **SIMULATION RESULTS**

Existing Techniques:

1. **Wix:**

- Wix is a platform that is used for website creation. It works on the principle of drag and drop where each component of the website needs to be dragged.
- All Wix websites are hosted on Wix's servers which are optimized for Wix websites.
- Wix offers a free plan if you don't mind having your site address structuredhttp://yourwebsite.wix.com/yourwebsite.
- Their paid plans aren't outstandingbut they are competitive enough for short-term projects.

2. **Grid**:

- The grid through organizing a massive content into evenly distributed columns and rows makes a compact arrangement with its own visual rhythm.
- Such consistent guidance allows users to easilyfollow the layout, develop familiarity with a project and rapidly absorb the information.
- Grid has been accused of creating boring, static designs. Some peoplebelieve that a grid only works in a fixed layout and sometime cannot satisfy specific web design aesthetic.
- Grid can be highly restrictive when imagery and other components arethrown into the mix.

Result:

Existing Technologies	Advantages	Disadvantages
Wix	Both Security and Services are bundled and taken care of	Drag and drop every-where.Templates cannot be edited
Grid	Dont have to code with your layouts on granular level	Buggy Interface. No control over the design.

Fig3: Comparison between Existing Techniques.

VI. CONCLUSION AND FUTURE WORK

Future Scope:

The future scope of the website would be to develop the website of any kind through minimum user intervention and generate more appropriate results and provide more accuracy. Websites will be able to process data and information on any scale to serve the interest of end user in a perfect manner. The time and efforts required will be reduced foe website generation. The phase of website generation will be taken to a next level by using this platform.

Conclusions:

The system is capable of analyzing user's content and creating eye catching website layouts.It can create websites using less resource and half the cost of building them. Basically it creates a website using the current system.

REFERENCES

1. Artificial Intelligence-A Modern Approach (Third Edition); Stuart Russel, Peter Norvig.
2. D. Qi, and B.D Davison, "Web page classification features and algorithms" , ACM Computing Surveys, vol. 41(2),Article 12,2009
3. D. Qi and B. Sun, "A genetic k-means approaches for automated Web page classification", In: Proceedings of the IEEE International Conference on Information Rescue and Integration IRI – 2004, pp.241-246, Las Vegas, NV, 2004
4. Chakraborty, R. C.,"Fundamentals of Genetic Algorithms", Artificial Intelligence course lecture 39 (2010):40
5. J. Han, and M Kamber, Data Mining Concepts and techniques, Morgan Kaufmann, San Francisco, 2006