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# Symptomatic Assistance

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**Abstract:** *The project aims to help the users get the idea if he/she may be suffering from heart disease or not. Web development is the work involved in developing a Website for the web (world wide web) or an intranet (a private network). Web development can range from Developing an easy single static page of plain text to complex web applications, electronic business and social networking services. The main goal of this website (SYMPTOMATIC ASSISTANCE) is to predict the possibility of having Heart disease. For this, the user needs to provide some information regarding their health. Such as blood pressure, glucose, cigarettes per day etc. According to which the website will respond. This will make people aware and help them improve their health. Machine learning is a method of data analysis that automates analytical model building. It is a branch of AI supported the thought that systems can learn from data, identify patterns and make decisions with minimal human intervention. For this we chose the best dataset from kaggle and used it in the best possible way to predict the output with high accuracy. For being able to predict the correct output, we applied a few machine learning models and chose the best fitted algorithm according to accuracy. For connecting machine Learning models with the webpages we used Flask. Flask is a micro framework written in Python. It is classified as a microframework because it doesn't require particular tools or libraries. It has no database abstraction layer, form validation, or any other components where pre-existing third-party libraries provide common functions. However, Flask supports extensions which will add application features as if they were implemented in Flask itself. Extensions exist for object-relational mappers, form validation, upload handling, various open authentication technologies and several common framework related tools. At the end will deploy our project using Heroku. Heroku is a cloud Platform as a service (PaaS) supporting several programming languages. One of the first cloud platforms, This project will make it easy for the user to know their health closely.*  
**Keywords:** SYMPTOMATIC ASSISTANCE, Web Development, Machine Learning, Flask, Heroku.

## I. INTRODUCTION

The target of our paper is to demonstrate our project named SYMPTOMATIC ASSISTANCE. This project involves both Machine Learning and Web Development Technologies. The main objective of our project is to show the prediction to the user the possibility of suffering from Heart disease. This will be predicted by the entries filled by the user.

## II. WEB DEVELOPMENT

IT is the work concerned in developing a Website for the Internet (World Wide Web) or an intranet (a non-public network). Web development will vary from developing a simple single static page of plain text to complex web applications, electronic businesses, and social network services. A lot of comprehensive list of tasks to that internet development unremarkably refers, could include Web engineering, Web design, online page development, shopper liaison, client-side/server-side scripting, internet server and network security configuration, and e-commerce development. Among internet professionals, "Web development" sometimes refers to the most non-design aspects of building internet sites: writing markup and coding. internet development could use content management systems (CMS) to form content changes easier and out there with basic technical skills. Web development refers to putting together web site and deploying on the net. Web development tools helps the developer to check and rectify the net sites. currently a day the net development toll keep company with the net browsers as add-ons. All internet browsers have inbuilt tools for this purpose. These tools permit the net developer to use HTML, CSS and JavaScript etc. These area unit accessed by hovering over an item on an online page.

## III. MACHINE LEARNING

Machine learning (ML) is that the study of computer algorithms that improve automatically through experience and by the utilization of knowledge. It's seen as a part of AI. Machine learning algorithms build a model supported sample data, known as "training data", so as to form predictions or decisions without being explicitly programmed to try to do so. Machine learning algorithms are utilized in a good sort of applications, like in medicine, email filtering, speech recognition, and computer vision, where it's difficult or unfeasible to develop conventional algorithms to perform the needed tasks.

A subset of machine learning is closely associated with computational static, which focuses on making predictions using computers; but not all machine learning is statistical learning. The study of mathematical optimization delivers methods, theory and application domains to the sector of machine learning. data processing may be a related field of study, that specialize in exploratory data analysis through unsupervised learning. In its application across business problems, machine learning is additionally referred to as predictive analysis.



#### IV. FLASK

Flask is a micro framework written in Python. It is classified as a microframework because it doesn't require particular tools or libraries. It has no database abstraction layer, form validation, or any other components where pre-existing third-party libraries provide common functions. However, Flask supports extensions that can add application features as if they were implemented in Flask itself. Extensions exist for object-relational mappers, form validation, upload handling, various open authentication technologies and several common framework related tools. Flask is considered more Pythonic than the Django web framework because in common situations the equivalent Flask web application is more explicit. Flask is also easy to get started with as a beginner because there's little boilerplate code for getting an easy app up and running. Flask was also written several years after Django and therefore learned from the Python community's reactions as the framework evolved. Jökull Sólberg wrote an excellent piece articulating to the present effect in his experience switching between Flask and Django.

#### V. VISUAL STUDIO CODES

Visual Studio Code may be a source-code editor made by Microsoft for Windows, Linux and macOS. include support for debugging, syntax highlighting, intelligent code completion, snippets, code refactoring, and embedded Git. Users can change the themes, keyboard shortcuts, preferences, and install extensions that add additional functionality.

Microsoft has released most of Visual Studio Code's source code on the microsoft/ vs codes repository of Github using the "Code – OSS " name, under the permissive MIT License while the releases by Microsoft are proprietary freeware.

In the Stack Overflow 2019 Developer Survey, Visual Studio Code was ranked the foremost popular developer environment tool, with 50.7% of 87,317 respondents reporting that they use it.

Visual Studio Code was first announced on April 29, 2015, by Microsoft at the 2015 built conference. A Preview build was released shortly thereafter. Visual Studio Code may be a lightweight but powerful source code editor which runs on your desktop and is out there for Windows, macOS and Linux. It comes with built-in support for JavaScript, TypeScript and Node.js and features a rich ecosystem of extensions for other languages (such as C++, C#, Java, Python, PHP, Go) and runtimes (such as .NET and Unity).



## VI. HEROKU

Heroku may be a cloud Platform as a service (PaaS) supporting several programming languages. One of the first cloud platform, This project will make it easy for the user to know their health closely. Heroku has been in development since June 2007, when it supported only the Ruby programming language, but now supports Java, Node Js, Scala, Python, PHP, and Go. For this reason, Heroku is said to be a polyglot platform because it has features for a developer to create , run and scale applications during a similar manner across most languages. Heroku was acquired by Salesforce.com in 2010 for \$212 million.

### A. The Heroku Platform

The Heroku network runs the customer's apps in virtual containers which execute on a reliable runtime environment. Heroku calls these containers "Dynos". These Dynos can run code written in Node, Ruby, PHP, Go, Scala, Python, Java, or Clojure. Heroku also provides custom buildpacks with which the developer can deploy apps in any other language. Heroku lets the developer scale the app instantly just by either increasing the amount of dynos or by changing the sort of dyno the app runs in.

### B. Heroku Teams

Heroku Teams may be a team management tool which provides collaboration and controls to bring a customer's developers, processes, and tools together so as to create better software. With Heroku Teams, teams can self-organize, add, and manage members, get fine-grained control with app-level permissions and also use collaboration tools like Heroku Pipelines. It also provides delegated administration and centralized billing.

### C. Heroku Enterprise

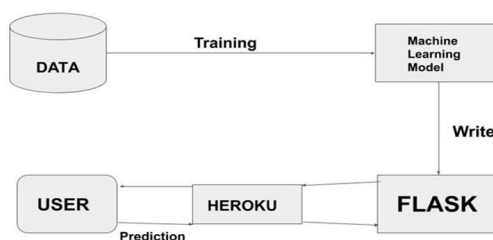
Heroku Enterprise provides services to large companies which help them to improve collaboration among different teams. It provides a set of features like fine-grained access controls, identity federation, and private spaces to manage their enterprise application development process, resources, and users.

### D. Heroku Connect

Heroku Connect lets users create Heroku apps that can easily integrate with Salesforce deployments at scale. this is often done by having a seamless data synchronization between Heroku Postgres databases and Salesforce organizations.

### E. Heroku Elements

Heroku Elements provides users with Add-ons (tools and services for developing, extending, and operating the app), Buildpacks (which automate the build processes for the preferred languages and frameworks) and Buttons (a tool for the one-click provisioning, configuring, and deployment of third party components, libraries and patterns).



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