

Open-source technology User report for flask

Code repository: <https://github.com/pallets/flask>

Framework: Flask

License Type: BSD-3-Clause License

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License Restrictions: The limitation of this framework is liability and warranty

Who worked with this: Haohui Lin, Jinwei Li, Shouyue Wu.

What does this tech do for you in your project?

Flask framework is foundation for developing applications and it contains in built modules and libraries which makes our group member working on backend much easier. it is lightweight web framework which create a web server of our own and host a website in less than seven lines of code, also the syntax and rules of this framework are easy to understand even if you are new to python. for example, In our code on server.py. `app = Flask(__name__, static_url_path= "")` is refer python class `Flask(scaffold)`, what class `Flask(scaffold)` do is implements a WSGI application and acts as the central object, it is passed the name of the module or package of the application. Also the class that is used for request response and environment object, `request_class = request`, `response_class = response`, so on. And the `request_class` is referred to the class `request(requestBase)`, what this class do is to inspect which methods are allowed for the URL form a before and after handle. The “class request” is base setup, it represents the HTTP request including the method like get post, URL info, and the header, and things like the charset used to decode most data in request `charset = “utf_8”`, and the error handling procedure for errors, default to ‘replace’.

<https://github.com/pallets/flask/blob/f976d5bb88216e921a96998f767df31d7039e4ef/src/flask/scaffold.py#L61>

<https://github.com/pallets/flask/blob/f976d5bb88216e921a96998f767df31d7039e4ef/src/flask/wrappers.py#L15>

<https://github.com/pallets/werkzeug/blob/main/src/werkzeug/sansio/request.py>

Where specifically is this tech used in your project?

we use this tech on server.py. To start the web server simply execute our script, the `socket_server.run` function encapsulates the startup of the web server and replace the `app.run()`. We are using `@socket_server.on` for creates a server-side event handler for event like checking connection, disconnection, message and other event such as receiving, sending, connection events or error handling.

How does this technology do what it does for you in the purpose section of this report?

This framework helps us to create a live chat, moment, join_room and leave_room, the purpose of this is making flask and WebSocket work.

Where is the specific code that does what you use the tech for? You must provide a link to the specific file in the repository for your tech with a line number or number range

https://github.com/Lostpart/CSE312_Project/blob/4dd44095eaed003fcc2052f39818c51db91a2649/chat/chat_controller.py#L20

https://github.com/Lostpart/CSE312_Project/blob/8fe7cdf37c179a3bb4bc4c1f65da1c9f9d2307a7/server.py#L12

https://github.com/Lostpart/CSE312_Project/blob/8fe7cdf37c179a3bb4bc4c1f65da1c9f9d2307a7/server.py#L17

Open-source technology User report

Framework: Vue.js

Code repository: <https://github.com/vuejs/vue>

License Type: MIT License

License Description: The permission of this framework is commercial use, can be modification, distribution, and private use. Also, this framework is granted, free of charge to any person obtaining a copy of this software and associated documentation files, to deal in the software without restriction including limitation the rights to use copy modify merge publish distribute sublicense and sell copies of the software.

License restrictions: The limitations of this framework are liability and warranty

Who work with this: Shen Hai Qi, yang chao wang

What does this tech do for you in your project?

Vue.js is flexible, it allows us to write our template in HTML file, JavaScript file and pure JavaScript file using virtual nodes, you can add and work with tools like templating engines, CSS preprocessors and type checking tools like typescript. And also Vue.js facilitates them to integrate with the existing applications, because base on JavaScript framework and can be integrated into other applications built on JavaScript. Vue.js consists of single file components, it includes all kinds of the code such as HTML, CSS, and JavaScript, everything will be in single file. Most importantly we can combine Vue.js and Element UI for better Vue integrations for agnostic libraries, such as bootstrap, Bulma. in our 312_Vue folder, it contains different sub folder such as router, views, components, which they all mount to #app, what it does is it's basically it "view" where the components are rendered, which 'main.js' div that contains all the components, and it returns the component that match the current route. **New Vue{router, vuetify, io, store, render: } ->h(APP)**. Also, we are including UI framework Vuetify, it base on vue.js framework and compiles with the material design, which mean that the core function of both Vue and material are available by default and can be use within vue.js. it provides build in templates for HTML, webpack, Apache cordova.

<https://github.com/vuejs/vue/tree/dev/dist>

<https://github.com/vuejs/vue/blob/dev/dist/vue.js>

<https://github.com/vuejs/vue/tree/dev/src/server>

<https://github.com/vuejs/vue/blob/dev/src/server/create-renderer.js>

<https://github.com/vuejs/vue/blob/dev/src/server/render.js>
<https://github.com/vuetifyjs/vuetify/tree/master/packages>
<https://github.com/vuetifyjs/vuetify/tree/master/packages/vuetify>

Where specifically is this tech used in your project?

We use Vue to replace HTML file. We write our code in component and import all the ". Vue" into single JavaScript file, inside of .Vue file we are creating default template, which is similar to HTML, it has script<> which we can write or JavaScript code inside and CSS Style, and we also use Vue router and view in our project, it helps link between the Brower's URL and components and allowing for certain path to render whatever view is associate with it.

How does this technology do what it does for you in purpose section of this report?

So Vue.js focus on the view part of our application, it links our data object model, which is view part, with our instance, the model part and linked by the data binding system, which mean "View <->view model <->model", between view and view model it has data binding, and model provide data to view model.

Where is the specific code that does what you use the tech for? You must provide a link to the specific file in the repository for your tech with a line number or number range

https://github.com/Lostpart/CSE312_Project/blob/8fe7cdf37c179a3bb4bc4c1f65da1c9f9d2307a7/312_vue/src/components/LoginForm.vue#L12

https://github.com/Lostpart/CSE312_Project/blob/8fe7cdf37c179a3bb4bc4c1f65da1c9f9d2307a7/312_vue/src/components/UiSessionPanel.vue#L41

https://github.com/Lostpart/CSE312_Project/blob/8fe7cdf37c179a3bb4bc4c1f65da1c9f9d2307a7/312_vue/src/main.js#L1

https://github.com/Lostpart/CSE312_Project/blob/deb2a4a55dfb853b25fe9e72ad96e53e842547bd/312_vue/src/main.js

Open-source technology User report for flask_socketio

Framework: Flask_socketio

Code repository: <https://github.com/miguelgrinberg/Flask-SocketIO>

License Type: MIT License

License description: The permissions of Flask_socketio is commercial use, can be modification, distribution, and private use, also it's free of charge, to any person obtaining a copy of the software and associated documentation files to deal in the software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and sell copy of the software.

License restrictions: The license restrictions are Liability and warranty.

Who worked with this: haohui lin, jinwei li, shouyue wu.

What does this tech do for you in your project?

The python framework Flask_socketio is a library that enables real time and full duplex communication between the client and the web servers, it uses the WebSocket protocol to provide the interface. It helps in broadcasting to multiple socket at a time and handle the connection transparently, it automatically upgrades the requirement to WebSocket if needed. In our code "server.py", we are importing socketIO, join_room, and leave_room from flask_socketio, what it does for our project is that the chat application with multiple room, where users receive messages from the room or rooms they are in, but not from other rooms where other users are. It use @socket_server.on connect and disconnect for creating room and leave the room with building function. In addition, flask_socketio framework also include build in function for decorator to register a SocketIO event handlers which we use it on our send_Chat, join, moment, what it does is to define a handle that takes a string payload, 'json' to define a handler that takes a Json blob payload, connect or disconnect to create handlers for connection and disconnection events.

https://github.com/Lostpart/CSE312_Project/blob/main/server.py

https://github.com/miguelgrinberg/Flask-SocketIO/blob/main/src/flask_socketio/init.py

Where specifically is this tech used in your project?

We use this tech on join room and leave room. In join room the function put the user in a room, under the current namespace the user and the namespace are obtained from the event context, so it called from a socketIO event handler, and it's same for leave room.

How does this technology do what it does for you in the purpose section of this report?

The purpose of this technology is implemented connection between server side and client side, the server side receive connect request and send acknowledgement using event and receive the update value event and broadcast value to all the clients, the client send back initiate socket connect to server side.

Where is the specific code that does what you use the tech for? You must provide a link to the specific file in the repository for your tech with a line number or number range

https://github.com/Lostpart/CSE312_Project/blob/ca88d83274b05b5d191d0151b93858473d1d86a3/chat/chat_controller.py#L8

https://github.com/Lostpart/CSE312_Project/blob/ca88d83274b05b5d191d0151b93858473d1d86a3/server.py#L15

<https://github.com/pallets/werkzeug/blob/main/src/werkzeug/local.py#L340>