



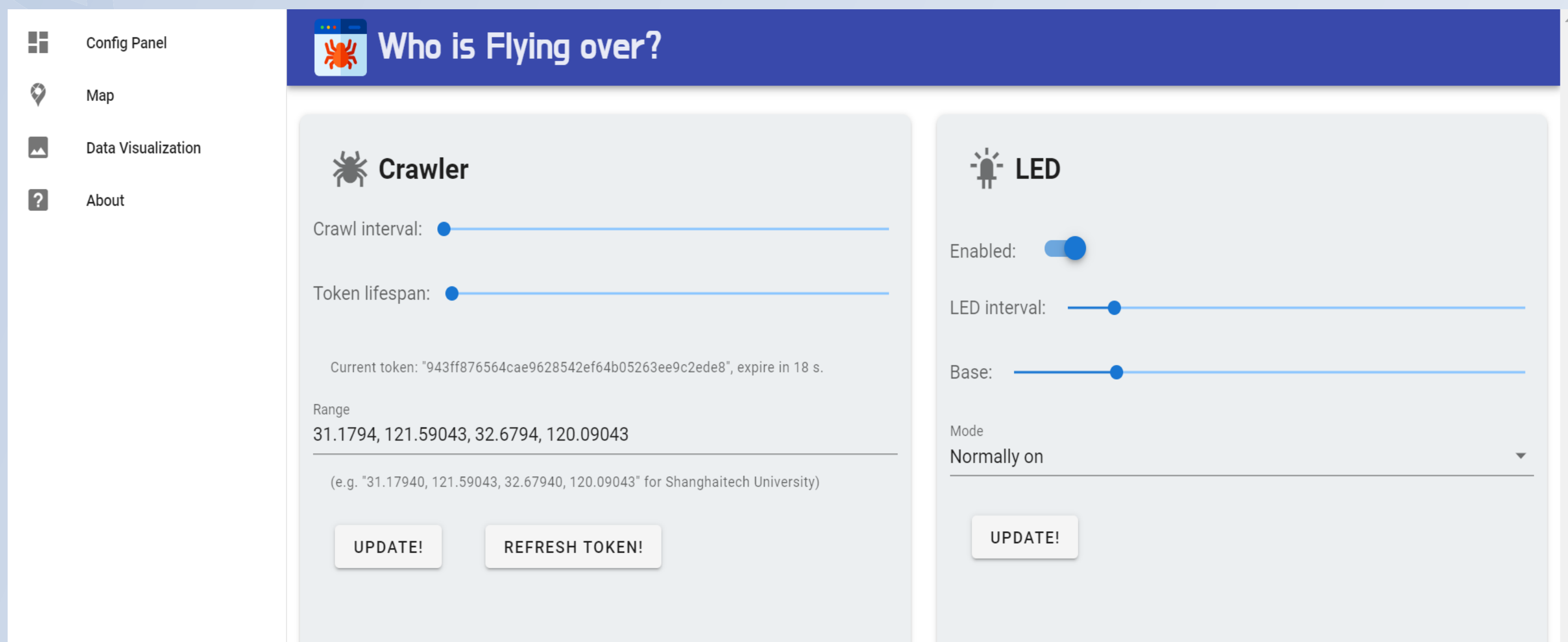
# Python Project: Who is flying over? Team GG

## Overview 概述

### Introduction:

We implemented a crawler to get flight data from <https://zh.flightaware.com/>, as well as an LED controller(to display the number of flights), a control panel(on website) and data visualization.

The crawler can automatically crawl the data per certain seconds, and LED will be lightened at the same time(based on the quantity of flights). We can modify parameters of crawler and LED via control panel to get data in customized areas, and some parts of the data will be displayed on the website.



## Feature 特色

1. Frontend is written in Vue.js, the UI is prettified by Vuetify.
2. We used Redis as a message queue to communicate among modules, avoiding shared mutable states.
3. We used JSON format for data storage, which is cross-language and cross-platform.
4. Frontend and backend applications communicate via RESTful API. Data are stored in .json files. Images are stored in Data URI.
5. Coordinates can be modified via the map on the website, which is more efficient(thanks to mapbox).

## Video 视频

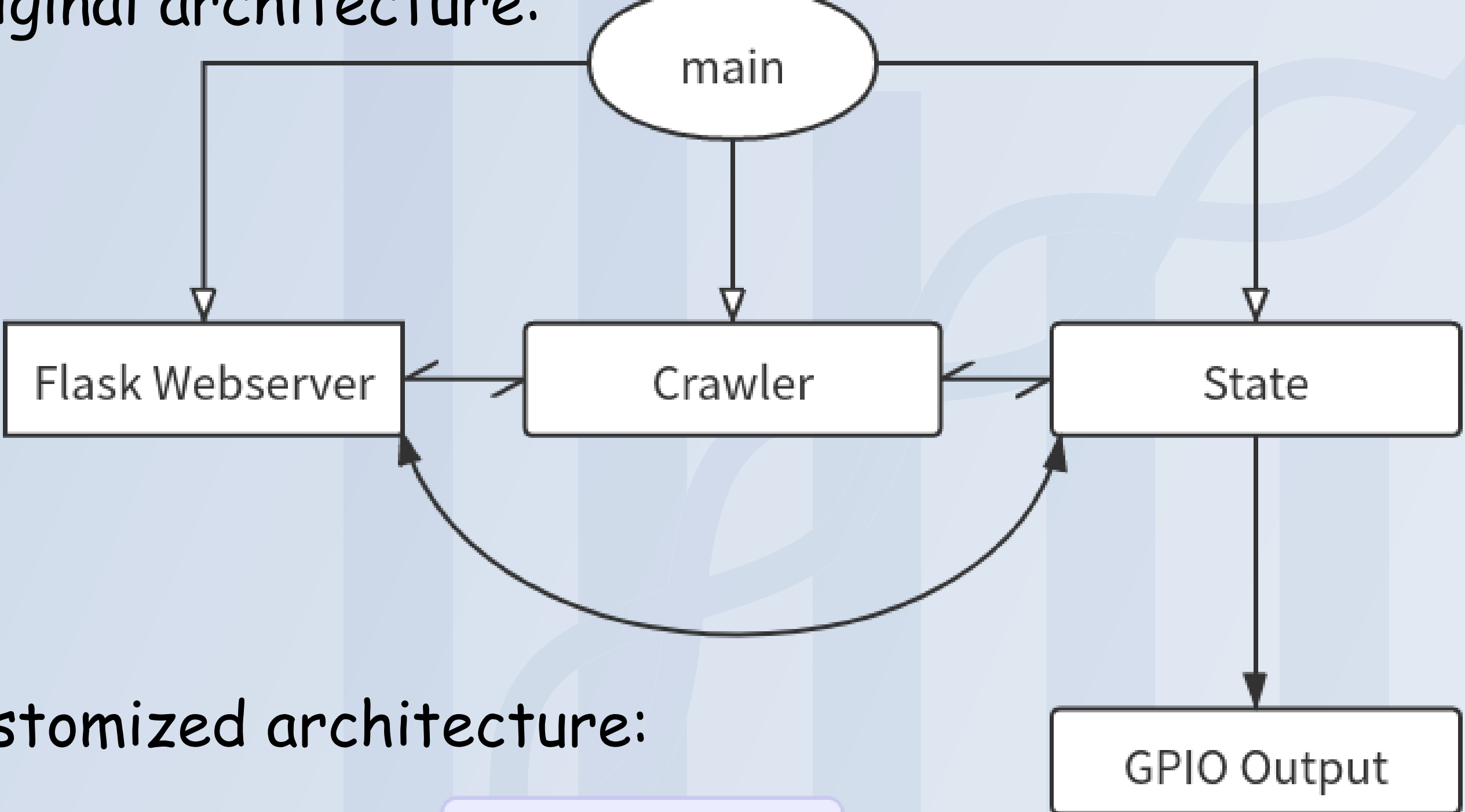
Videos have been posted on Bilibili.com.  
Here is the URL:  
<https://www.bilibili.com/video/BV1p5411n77P>

Here is the QR Code:

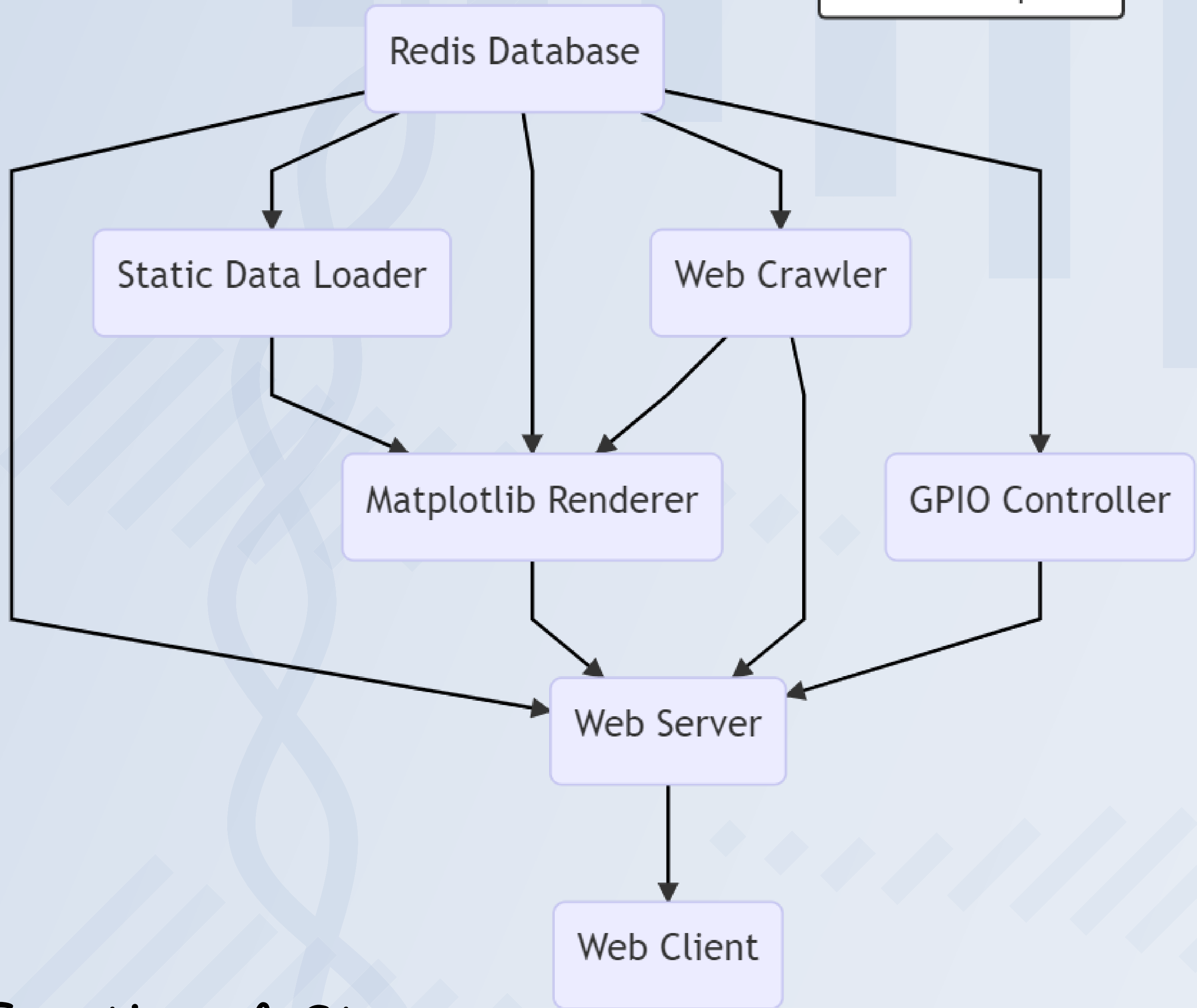


## Design 设计

### Original architecture:



### Customized architecture:



### Functions & Steps:

- 1.Crawl data from Flight Aware;
- 2.Store data in Redis;
- 3.Render images with matplotlib;
- 4.Show a fancy but useless UI to your user.

## Team 队员

### 迟择恩

- My brain has two parts, the left and the right. My left brain has nothing right, and the right brain has nothing left...
- Hobbies=Basketball
- Responsible for data retrieving, formatting and cleaning

### 刘翊航

- A student.
- Hobbies=None
- Responsible for frontend and data visualization

### 彭程

- Make free software great again.
- Hobbies=Computer Vision
- Responsible for backend

