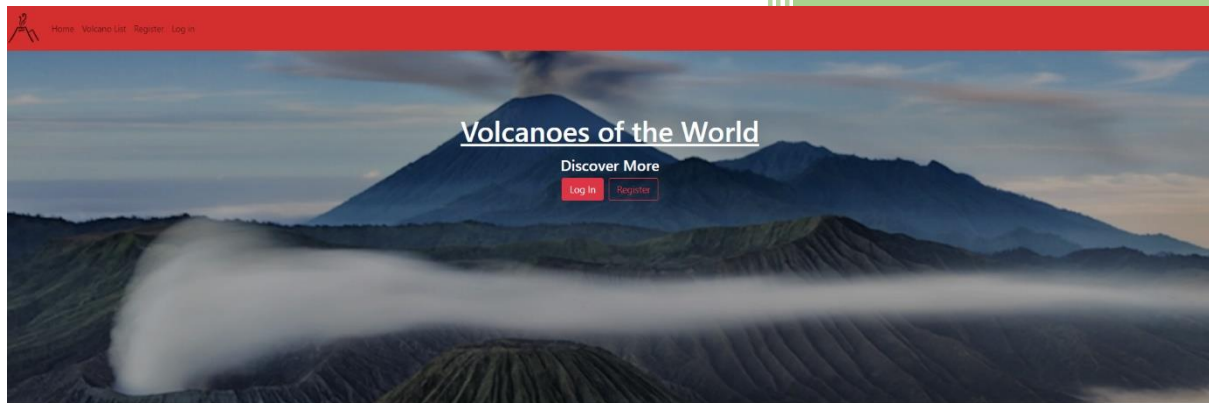


2022

# CAB230 Assignment 1 Client Side



CAB230

Volcano API – Client Side Application

Automatic 48-hour Extension  
Granted

See appendices for email copy

Josh Fell

n10163140

20/05/2022

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## Introduction

### Purpose & description

The goal of this application is to display information about various volcanoes from around the world. The information is obtained from a REST API and displayed in a table containing information about all volcanoes from a chosen country. When a cell in the table is clicked, the user is taken to a new page that displays further information about a specific volcano.

The app was styled using react-bootstrap for the navbar, buttons and forms. Ag-grid was used to display the list of volcanoes.

### Completeness and Limitations

The application in its current state works with only very minimal errors or missing functionality. Navigation between pages is present, with the navbar being able to direct users to the main pages and useNavigate() to direct them to the individual volcano page. The volcano list is always available, however, nothing will be displayed on the individual volcano page unless a JWT token is validated. Users can register and login using forms. There is a search bar above the AG Grid that allows users to search for volcanoes by country and a full list of available countries can be seen below the Ag Grid. Authenticated users can click on a cell in the Ag grid to be redirected to the individual volcano page, which displays the volcanoes last eruption, summit and elevation. A map marked with the volcanoes coordinates and a graph containing the population density is also present.

There is an error with the map that occurs on the individual volcano page when dragging the map with the mouse. The marker goes to the default centre of the map and does not correct itself to the volcano coordinates. However, the map works very well when only using the mouse scroll wheel.

The ability to select filter the volcanoes based on whether they are populated within a certain range is not present on the volcano list page. This information is displayed on a graph on the Individual volcano page.

## Use of End Points

### /countries

- A list of available countries is presented in a react-bootstrap accordion

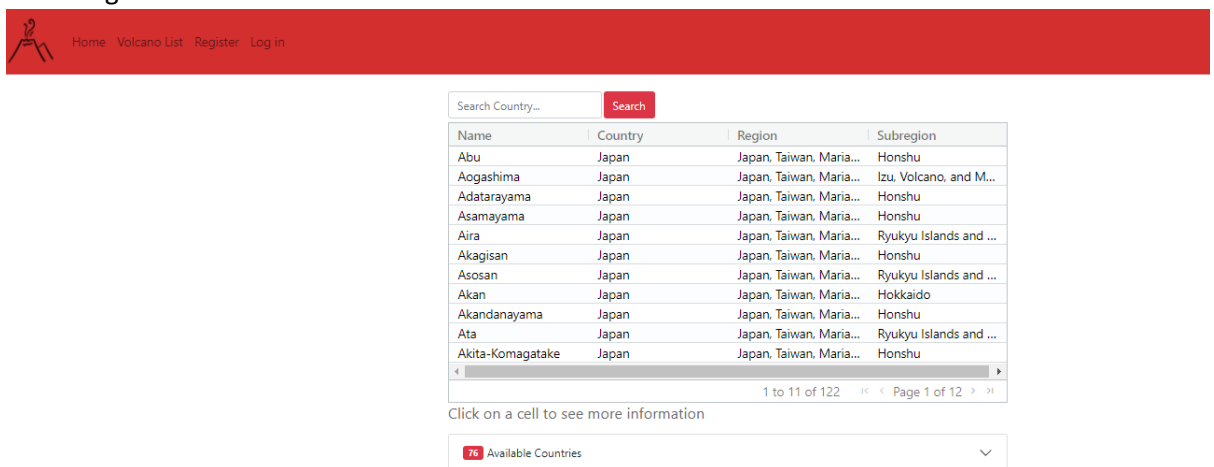


- The user input from the search bar is also used to check if the country exists among the available countries retrieved from the end point. This executes when the search button is clicked.

```
function CheckCountry(){
  for (let i = 0; i < cntryData.length; i++){
    try{
      if (userInput == cntryData[i]){
        setCountry(userInput)
        console.log("Country Found")
        setUserInput("")
      }
    }
    catch{
      alert("Country not found")
    }
  }
}
```

## /volcanoes

- Used to get volcano data for the AG Grid table



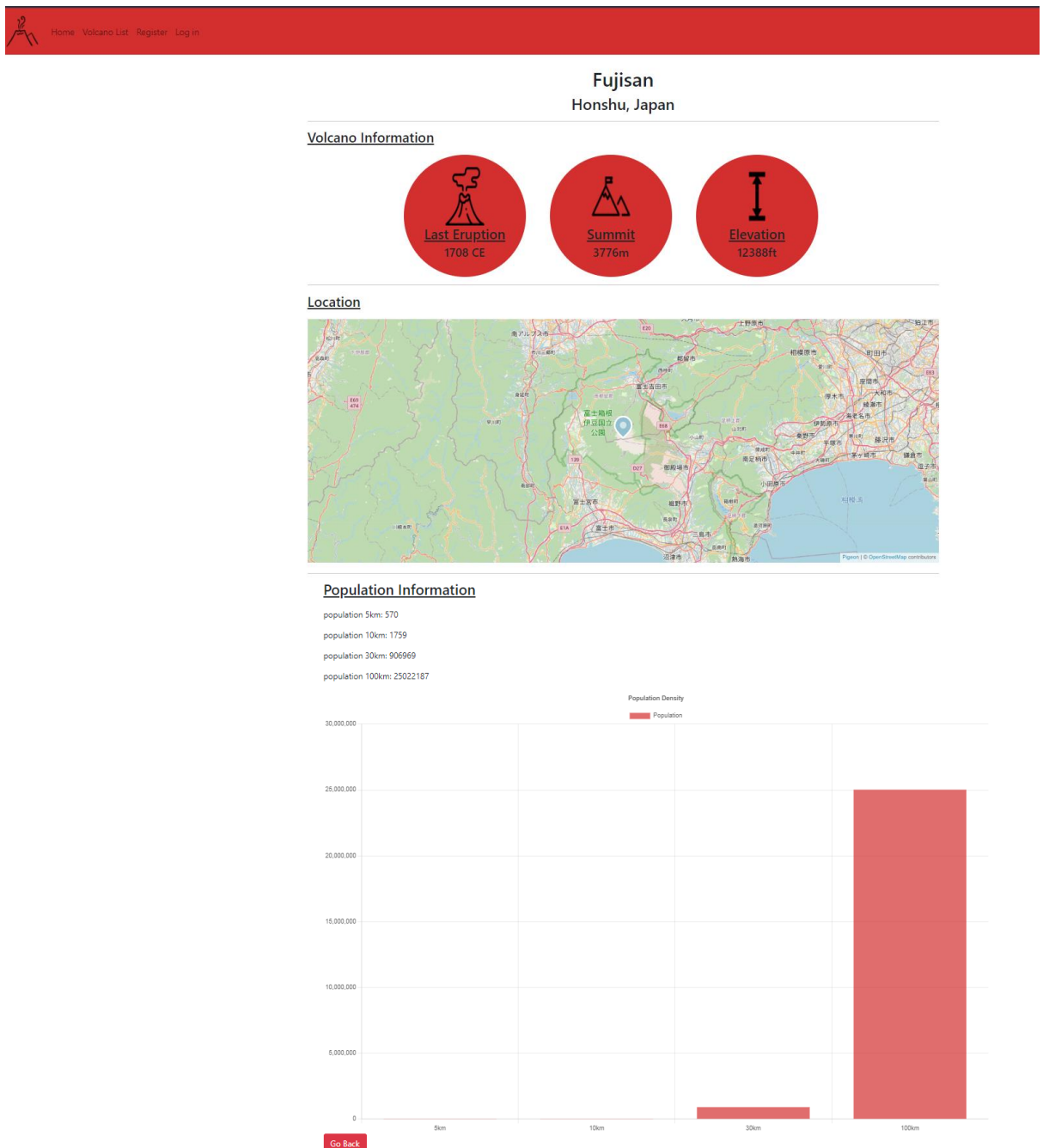
The screenshot shows the /volcanoes page with a red header bar containing a logo and navigation links: Home, Volcano List, Register, Log in. Below the header is a search bar with the text "Search Country..." and a red "Search" button. The search results are displayed in a table with the following data:

Name	Country	Region	Subregion
Abu	Japan	Japan, Taiwan, Maria...	Honshu
Aogashima	Japan	Japan, Taiwan, Maria...	Izu, Volcano, and M...
Adatarayama	Japan	Japan, Taiwan, Maria...	Honshu
Asamayama	Japan	Japan, Taiwan, Maria...	Honshu
Aira	Japan	Japan, Taiwan, Maria...	Ryukyu Islands and ...
Akagisan	Japan	Japan, Taiwan, Maria...	Honshu
Asosan	Japan	Japan, Taiwan, Maria...	Ryukyu Islands and ...
Akan	Japan	Japan, Taiwan, Maria...	Hokkaido
Akandanayama	Japan	Japan, Taiwan, Maria...	Honshu
Ata	Japan	Japan, Taiwan, Maria...	Ryukyu Islands and ...
Akita-Komagatake	Japan	Japan, Taiwan, Maria...	Honshu

Below the table is a pagination control showing "1 to 11 of 122" and "Page 1 of 12". A link "Click on a cell to see more information" is also present. At the bottom, there is a dropdown menu labeled "76 Available Countries".

## /volcano/{id}

- Used to display more detailed information about a volcano clicked on in the volcano list on a new page. This includes the volcanoes last eruption, summit, elevation, latitude, longitude and population density within 5, 10, 30 and 100km



## /user/register

- Used on Register page. The user enters their desired email and password in a react-bootstrap form, which is authenticated via POST request.

Home Volcano List Register Log in

User created

OK

Email address

n10163140@gmail.com

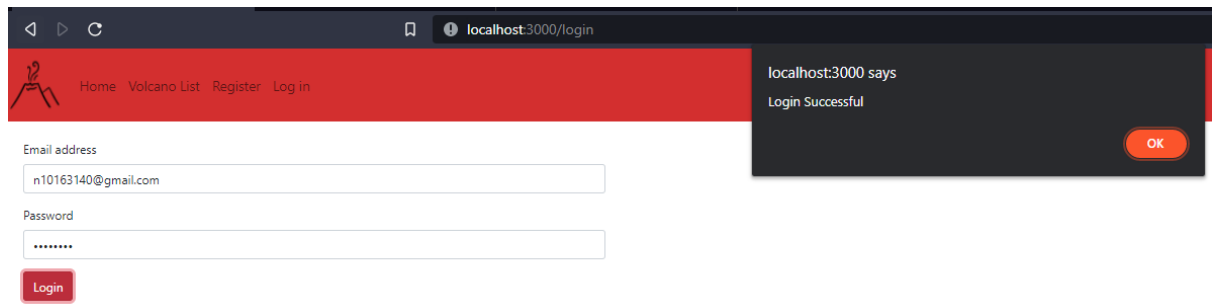
Password

\*\*\*\*\*

Register

## /user/login

- Used on Login page. The user enters their registered email and password in a react-bootstrap form, which is authenticated via POST request. This generates a JWT token.



## Modules Used

### *Ag-grid-react*

Module to provide fully-featured table components, including sorting and filtering.

<https://www.ag-grid.com/react-grid/>

### *react-bootstrap*

Module used for styling navbar, buttons and forms.

<https://react-bootstrap.github.io>

### *pigeon-maps*

Module used for mapping volcano location

<https://pigeon-maps.js.org/docs/>

### *react-chartjs-2*

module used to chart population data

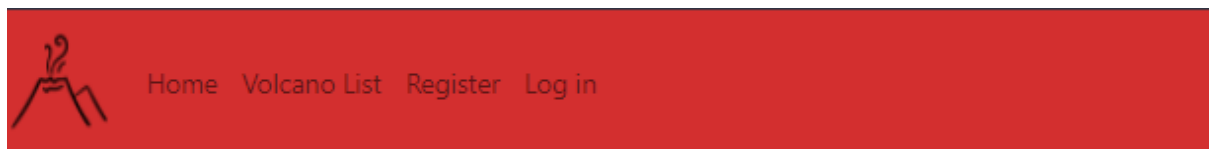
<https://www.npmjs.com/package/react-chartjs-2>

## Application Design

### Navigation and Layout

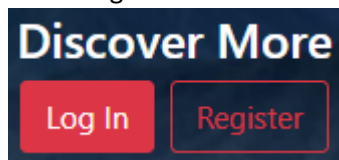
The application uses a simple react-bootstrap navbar for navigation between the main pages. The “Login”, “Register” and “Go Back” buttons make use of react-router-dom’s `useNavigate()` function, clicking on a cell in the volcano list table also uses `useNavigate()` to take the user to the individual volcano page.

Navbar:

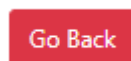


Buttons:

- Home Page:



- Individual Volcano Page:



- Login and Register Pages



- 



- 

### Usability and Quality of Design

The application has a decent quality of design and usability. Everything is well organized, but visually basic. Navigation is clear and consistent with what a user would expect with any other website. However, they would likely not know clicking on a cell in the volcano list table would direct them to another page. A simple message has been placed under the table to let them know. The colours are fairly consistent throughout the app and there isn't too many different colours. The react-bootstrap buttons contain white text on a red background, whereas the rest of the app uses black text with a red or white background.

### Accessibility

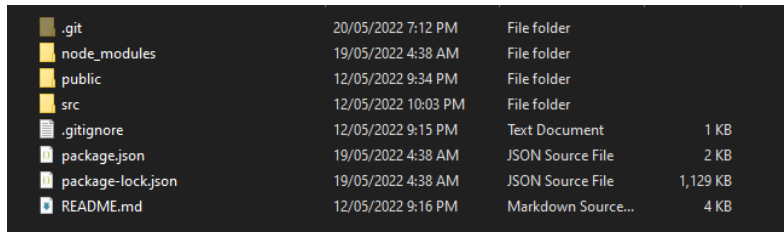
The following measures have been made to help make the application more accessible.

- Text alternatives for images
- Sufficient contrast has been used to make everything easy to see
- Users always have enough time to read the and use content
- The navbar and tips help users navigate and find content
- All text is readable and understandable
- Content appears and operates in predictable ways
- Forms contain labels

## Technical Description

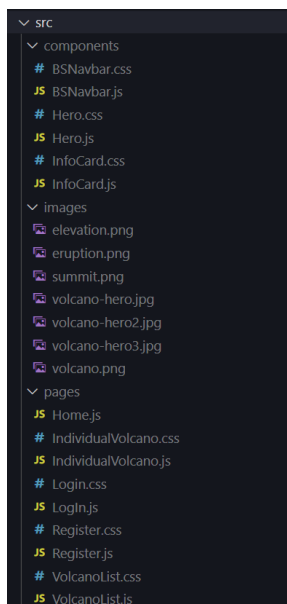
### Architecture

The application was created using the “npx create-react-app” command, which gave a starting template. Then code from App.js and App.css was deleted in order to be replaced with my own code. The following image shows how the code has been organized.



.git	20/05/2022 7:12 PM	File folder	
node_modules	19/05/2022 4:38 AM	File folder	
public	12/05/2022 9:34 PM	File folder	
src	12/05/2022 10:03 PM	File folder	
.gitignore	12/05/2022 9:15 PM	Text Document	1 KB
package.json	19/05/2022 4:38 AM	JSON Source File	2 KB
package-lock.json	19/05/2022 4:38 AM	JSON Source File	1,129 KB
README.md	12/05/2022 9:16 PM	Markdown Source...	4 KB

The src directory contains a components, pages and images folder. These files contain everything I have created for the application.



src	
components	
BSNavbar.css	
BSNavbar.js	
Hero.css	
Hero.js	
InfoCard.css	
InfoCard.js	
images	
elevation.png	
eruption.png	
summit.png	
volcano-hero.jpg	
volcano-hero2.jpg	
volcano-hero3.jpg	
volcano.png	
pages	
Home.js	
IndividualVolcano.css	
IndividualVolcano.js	
Login.css	
Login.js	
Register.css	
Register.js	
VolcanoList.css	
VolcanoList.js	

### Test plan

Task	Expected Outcome	Result	Screenshot (Appendices/ Screenshots)
Search Country	Search for “Australia” and see Ag Grid update to show results	Pass	1
Test Pagination	Try going to page 2 of the Japan results and see if the results are correct.	Pass	2
Filter by volcano name	AG Grid updates to only show volcanoes named “Fujisan”	Pass	3
Filter by region	AG Grid updates to only show volcanoes in “Kuril Islands”	Pass	5
Filter by subregion	AG Grid updates to only show volcanoes in “Hokkaido”	Pass	5
Click on Ag Grid cell	Click on “Fujisan” cell and get directed to individual volcano page. Displays all information, a map and a graph.	Pass	6



Register with email and password	Register a user with an email and password sent in POST request, resulting in "user created" message being displayed	Pass	7
Register without password or email	Register a user without specifying an email address, or giving a password, resulting in "Request body incomplete, both email and password are required" message being displayed	Pass	8
Register with existing email	Register a user that already exists, resulting in "User already exists" message being displayed	Pass	9
Login with registered email and password	Login and see "Login Successful" message being displayed	Pass	10
Login with no email, or no password	Login without incomplete email or password, resulting in "Request body incomplete, both email and password are required" message being displayed	Pass	11
Login with incorrect email or password	Login with an incorrect email or password, resulting in "Incorrect email or password" message being displayed	Pass	12
Display all countries	Click on the accordion to see a list of available countries on the volcano list page	Pass	13

#### Difficulties / Exclusions / unresolved & persistent errors /

Some functionality is missing from the project. Users cannot filter volcanoes based on population density on the volcano list page.

There is a bug with the map where dragging the mouse to move the map with cause the marker to go to the default center, instead of the given coordinates.

#### User guide

- Use the navbar at the top of the page to navigate between the main pages.
- The Main page has buttons that can direct you to the login or register page if desired.
- Clicking on a volcano's table cell on the Volcano List page will take you to a new page with the rest of the information about that volcano.
  - You must be logged in to see the information. Otherwise only undefined results will be returned.
  - Only use the scroll wheel to interact with the map. Dragging with mouse breaks the map's marker.
  - Use the navbar or "Go Back" button to return to the volcano list, home page or login/register pages.

#### References

Hutson, H. Soro, A. 2022. "CAB230 Web Development: Week 5 lecture notes." Accessed May 19, 2022. [https://blackboard.qut.edu.au/bbcswebdav/pid-9625184-dt-content-rid-44511759\\_1/courses/CAB230\\_22se1/WD4-Accessibility.pdf](https://blackboard.qut.edu.au/bbcswebdav/pid-9625184-dt-content-rid-44511759_1/courses/CAB230_22se1/WD4-Accessibility.pdf)

## Appendices

### 48 Hour Extension email

N

no-reply@qut.edu.au

To: Josh Fell

Fri 20/05/2022 00:10

Hi Josh,

Thank you for your assignment extension request (**FORM-AEX-96613**).

We have approved your request and the due date for your assignment **Assessment 2: Project (applied) - Client Side**, for unit CAB230 has been extended by 48 hours from the original due date. If your unit outline does not specify that your assignment is eligible for an extension, this confirmation email is not valid and unless you submit by the original due date, the late assessment policy will apply.

**A copy of this email must be attached to the front page of your assignment when you submit it.**

You are responsible for:

- Ensuring that this assignment is eligible for extension before submitting it after the original due date.
- Attaching a copy of this email to your assignment when you submit it.

Be aware that a copy of this email is kept on file. You should not alter this email in any way. Email notifications that have been altered or differ in any way from the original may result in an allegation of student misconduct as set out in the [Student Code of Conduct](#).

**Need extra support?** You can access free, confidential [counselling with qualified professionals](#). We also offer [planning and support if you have a disability, injury or health condition](#) that affects your ability to study. If you are struggling to meet your university commitments, [academic support](#) is also available.

**Have a question?** Check our online help on [late assessment and extensions](#). We're also available to help you, visit the [HiQ website](#) for contact details and opening hours.

Email us

+61 7 3138 2000

HiQ is your place to go for **student services, support and general enquiries**: [qut.to/abouthiq](#)

hi, how can we help you?


You have received this email because you have submitted an assignment extension request. View our [Privacy and Security statement](#).

Ref ID: 101631401-0700A-85X-90513

Page 9 | 14

## Test Screenshots

1

 Home Volcano List Register Log in


Name	Country	Region	Subregion
Heard	Australia	Middle East and Ind...	Indian Ocean (south...
Newer Volcanics Pro...	Australia	Melanesia and Austr...	Australia
McDonald Islands	Australia	Middle East and Ind...	Indian Ocean (south...

1 to 3 of 3 < > Page 1 of 1 >>

Click on a cell to see more information

▾

2

 Home Volcano List Register Log in

Name	Country	Region	Subregion
Akita-Yakeyama	Japan	Japan, Taiwan, Maria...	Honshu
Akusekijima	Japan	Japan, Taiwan, Maria...	Ryukyu Islands and ...
Azumayama	Japan	Japan, Taiwan, Maria...	Honshu
Doyo Seamount	Japan	Japan, Taiwan, Maria...	Izu, Volcano, and M...
Bandaisan	Japan	Japan, Taiwan, Maria...	Honshu
Chachadake [Tiatia]	Japan	Kuril Islands	Kuril Islands
Berutarubesan [Beru...	Japan	Kuril Islands	Kuril Islands
Fujisan	Japan	Japan, Taiwan, Maria...	Honshu
Fukue	Japan	Japan, Taiwan, Maria...	Ryukyu Islands and ...
Fukutoku-Oka-no-Ba	Japan	Japan, Taiwan, Maria...	Izu, Volcano, and M...
Esan	Japan	Japan, Taiwan, Maria...	Hokkaido

12 to 22 of 122 < > Page 2 of 12 >>

Click on a cell to see more information

▾

3

Name ▾	Country	Region	Subregion
Fujisan	<div><div>Contains</div><div>fujisan</div><div>AND OR</div><div>Contains</div><div>Filter...</div></div>	Japan, Taiwan, Maria...	Honshu

1 to 1 of 1 < > Page 1 of 1 > >>

Click on a cell to see more information

76 Available Countries

▾

4

Name	Country	Region ▾	Subregion
Chachadake [Tiatia]	Japan	Kuril Islands	<div><div>Contains</div><div>kuril islands</div><div>AND OR</div><div>Contains</div><div>Filter...</div></div>
Berutarubesan [Beru...	Japan	Kuril Islands	
Chirippusan [Chirip]	Japan	Kuril Islands	
Etorofu-Atosanupur...	Japan	Kuril Islands	
Etorofu-Yakeyama [...	Japan	Kuril Islands	
Hitokappu Volcano ...	Japan	Kuril Islands	Kuril Islands
Moekeshiwan [Lvina...	Japan	Kuril Islands	Kuril Islands
Odamoisan [Tebenk...	Japan	Kuril Islands	Kuril Islands
Moyorodake [Medv...	Japan	Kuril Islands	Kuril Islands
Rakkibetsudake [De...	Japan	Kuril Islands	Kuril Islands
Sashiusudake [Bara...	Japan	Kuril Islands	Kuril Islands

1 to 11 of 15 < > Page 1 of 2 > >>

Click on a cell to see more information

76 Available Countries

▾

5

Name	Country	Region	Subregion ▾
Akan	Japan	Japan, Taiwan, Maria...	<div><div>Contains</div><div>Hokkaido</div><div>AND OR</div><div>Contains</div><div>Filter...</div></div>
Esan	Japan	Japan, Taiwan, Maria...	
Hokkaido-Komagat...	Japan	Japan, Taiwan, Maria...	
Kussharo	Japan	Japan, Taiwan, Maria...	
Kuttara	Japan	Japan, Taiwan, Maria...	
Maruyama	Japan	Japan, Taiwan, Maria...	Hokkaido
Mashu	Japan	Japan, Taiwan, Maria...	Hokkaido
Niseko	Japan	Japan, Taiwan, Maria...	Hokkaido
Taisetsuzan	Japan	Japan, Taiwan, Maria...	Hokkaido
Oshima-Oshima	Japan	Japan, Taiwan, Maria...	Hokkaido
Rausudake	Japan	Japan, Taiwan, Maria...	Hokkaido


1 to 11 of 18 < > Page 1 of 2 > >>

Click on a cell to see more information

76 Available Countries

▾


6


[Home](#)
[Volcano List](#)
[Register](#)
[Log in](#)


## Fujisan

Honshu, Japan


### Volcano Information



**Last Eruption**  
1708 CE




**Summit**  
3776m



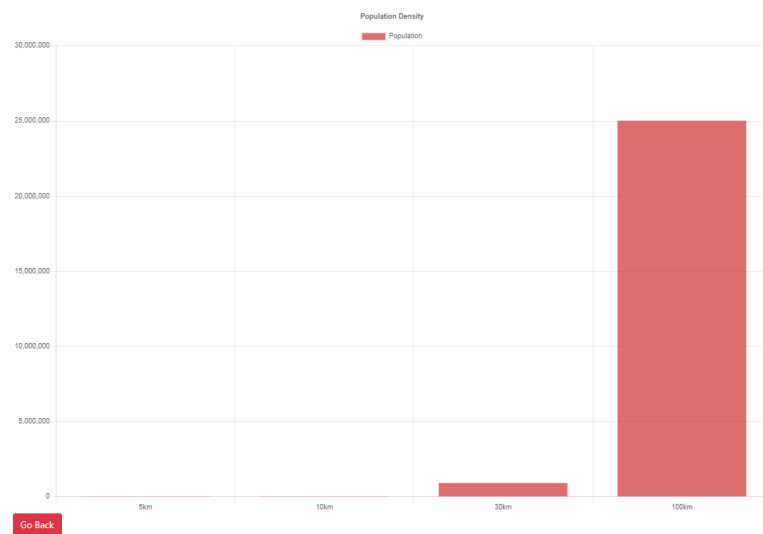
**Elevation**  
12388ft

### Location




### Population Information

population 5km: 570  
 population 10km: 1759  
 population 30km: 906969  
 population 100km: 25022187



7


[Home](#)
[Volcano List](#)
[Register](#)
[Log in](#)

localhost:3000 says

User created


OK

Email address

Password

Register

8

 [Home](#) [Volcano List](#) [Register](#) [Log in](#)


Email address

Password

localhost:3000 says

Request body incomplete, both email and password are required

9

 [Home](#) [Volcano List](#) [Register](#) [Log in](#)


Email address

Password

localhost:3000 says

User already exists

10

 [Home](#) [Volcano List](#) [Register](#) [Log in](#)


Email address

Password

localhost:3000 says

Login Successful

11

 [Home](#) [Volcano List](#) [Register](#) [Log in](#)


Email address

Password

localhost:3000 says

Request body incomplete, both email and password are required

12

 [Home](#) [Volcano List](#) [Register](#) [Log in](#)

Email address

Password

localhost:3000 says

Incorrect email or password

75 Available Countries
Algeria
Antarctica
Argentina
Armenia
Australia
Bolivia
Burma (Myanmar)
Cameroon
Canada
Cape Verde
Chad
Chile
China
Colombia
Comoros
Costa Rica
Djibouti
Dominica
DR Congo
Ecuador
El Salvador
Equatorial Guinea
Eritrea
Ethiopia
Fiji
France
Georgia