

AUSTRALIAN WILDLIFE MAP PROJECT

Australian wildlife map | B.Rowe 3114634 | University of Canberra, 2018.



Background & Inspiration

When I finished the Weather Application for the second project for Dynamic Data, the element I found I enjoyed most from the project was using information that constantly refreshed on the page. Much like Facebook news streams, Instagram stories, Reddit and other social media sites I'm always drawn back to go and check to see what has changed.

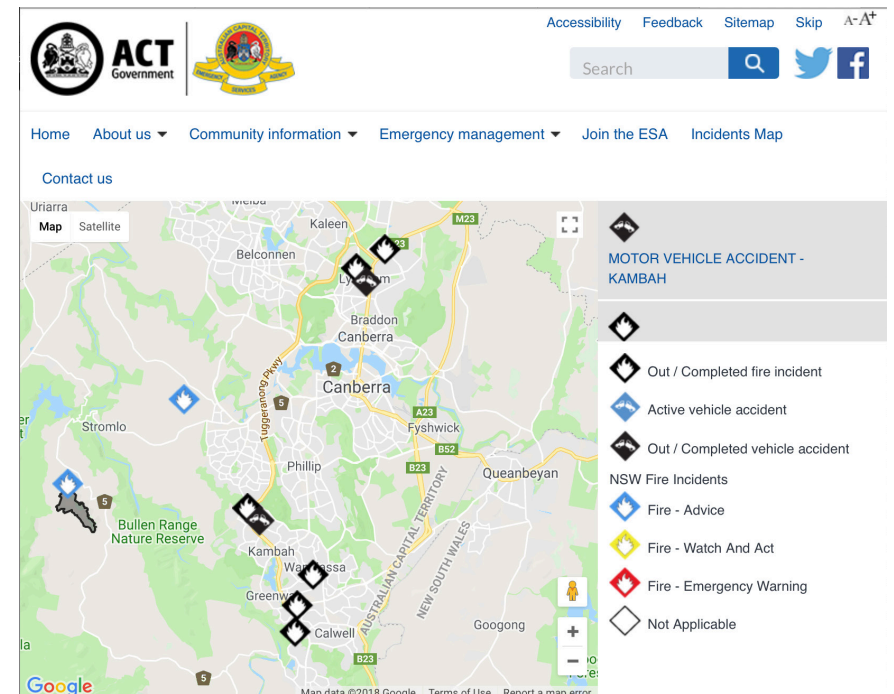
When I thought about what I wanted to achieve and learn about from this project, I wanted to work on extending what I already learnt about with Darksies API but also find a better way to visually output information for exciting user experience. I liked the idea of using interactive Google maps and Google Charts to show that information visually.

Unfortunately, I was stuck with what data I wanted to display, limitations as to cost of APIs out there and how I was to deliver it.

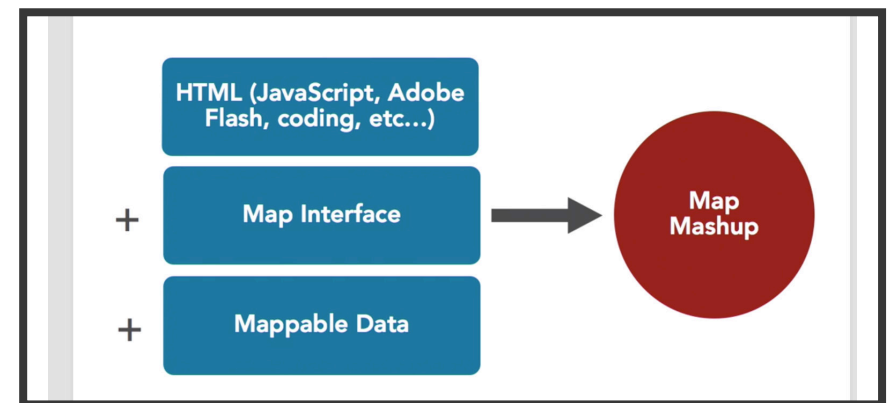
My first idea was to investigate what statistical information and data of the Australian government were out there. I looked into Health and welfare through Department of Human Services (DHS) and Australian Federal Police (AFP) - Crime incidents data. While I found this type of information about the Australian public interesting, I found these were not always up to date, vague data sets and hard for me to understand.

While searching these options and other Australian API's I came across the Atlas of Living Australia (ALA) who pull information from credible sources about Australia's biodiversity. The site offers datasets on animals, including occurrences of where to locate them in Australia, images and information about the animal family they belong too.

Now that I found a dataset that I found interesting, I looked into plotting the occurrences on mapping API like Google Maps and OpenStreetMaps. I signed up for both, but I found that the cost involved and that plotting incidents would be time-consuming. I did go down the rabbit hole a bit too far on this idea to try and find a third party solution. I later found out that there is also a database of heatmaps on the ALA and decided that even though it wasn't customisable and the user can't look up information on the map, visually it displayed the location of where to find the species the user looks up and is a beautiful information graphic.



ACT Emergency Services Agency - Incident map



Lynda tutorials learning how to use Map APIs

Working on the project

For the CSS styling, I wanted both something that felt Australian, differed from the ALA website and also didn't fall into the trap of using predominantly green to illustrate nature. I went for organic brown/ red colours and used a full Gold pop colour for headings. While for users with visual difficulties it is not as inclusive an option as black and white but I did feel it illustrates a rustic calm atmosphere which works well for this project. I used Source Sans Pro for the font family as it's a very sharp style and has a lot of variety in font weights, and I tend to as a rule stay away from serifs unless it's for headings when it comes to outputting to web devices

Using JQuery functions to make GET requests to the ALA I managed to make the call successfully and get the response I wanted back, but I couldn't load the data again into the HTML. After receiving some much-needed help, I realised I got 90% of the way there but missed a couple of vital steps. Reapplying the code to the HTML, I was able to use the search button to look for the animal query, and get back a list of possible answers, select the first answer's identification number and load that information again on the page as well.

Once I had the GUID of the species I was able to start appending information from the animal classifications to the DIV "AniBio". Selecting the official species name, common name and the rankings associated with the species I could

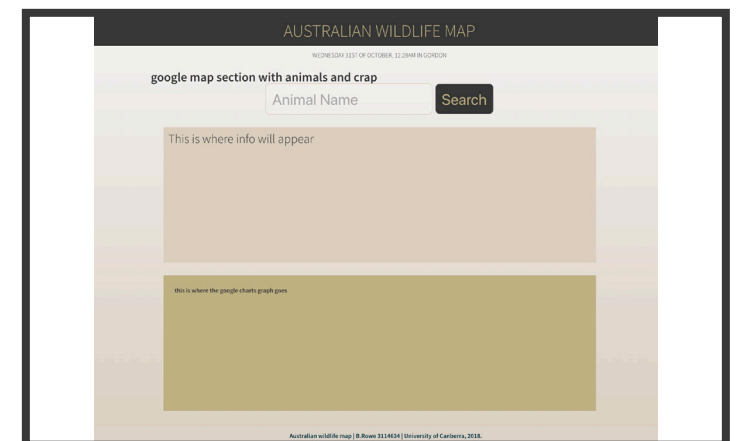
display information about the species the users requested. While I couldn't grab information from these classifications directly, I could link back to the ALA so that you could read further details.

I made an API call using the common name to return the heat map image which I put in a separate section in the HTML. I wanted this to be the centre item as it is visually the most interesting data on the page.

I reused the output of the options from the search in the last section in case the species selected was not what the user was looking for and can copy and paste it the correct answer back into the search bar.

```
▼ {searchResults: {...}} ⓘ
▼ searchResults:
  ► facetResults: []
  queryTitle: "Red Kangaroo"
  ▼ results: Array(10)
    ► 0: {id: "7a664bd1-253f-4108-97ba-9c6...", guid: "6391950", ...}
    ► 1: {id: "https://collections.ala.org...", guid: "6391950", ...}
    ► 2: {id: "https://collections.ala.org...", guid: "6391950", ...}
    ► 3: {id: "ba6950c1-bf06-474d-a06a-d93...", guid: "6391950", ...}
    ► 4: {id: "https://collections.ala.org...", guid: "6391950", ...}
    ► 5: {id: "6391950", guid: "6391950", ...}
    ► 6: {id: "4ccac963-1083-499d-80a1-561...", guid: "6391950", ...}
    ► 7: {id: "0fc39d82-a540-4fd4-bd09-a33...", guid: "6391950", ...}
    ► 8: {id: "41ed131f-34b8-4386-bd76-93a...", guid: "6391950", ...}
    ► 9: {id: "bbae0ad7-6658-4d51-a0e2-c9a...", guid: "6391950", ...}
  length: 10
  ► __proto__: Array(0)
totalRecords: 3531
  ► __proto__: Object
  ► __proto__: Object
```

Getting a response back from SearchSpecies call



Creating the CSS theme for the Australian Wildlife Map

AUSTRALIAN WILDLIFE MAP

SUNDAY 11ST OF NOVEMBER, 2:10PM IN GORDON

Rosella

Go Find

eg. Little Penguin, Dingo, Australian Raven, Red Kangaroo, Rosella, and Goanna

Western Rosella

"*Platycercus (Violania) icterotis*"

ANIMALIA | CHORDATA | AVES | undefined | PSITTACIFORMES | PSITTACIDAE | PSITTACIFORMES | Platycercus (Violania) icterotis



AUSTRALIAN WILDLIFE MAP

SUNDAY 11ST OF NOVEMBER, 2:10PM IN GORDON

Rosella


Go Find

eg. Little Penguin, Dingo, Australian Raven, Red Kangaroo, Rosella, and Goanna

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"*Platycercus (Violania) icterotis*"

ANIMALIA | CHORDATA | AVES | undefined | PSITTACIFORMES | PSITTACIDAE | PSITTACIFORMES | Platycercus (Violania) icterotis



Heat map of species location

AUSTRALIAN WILDLIFE MAP

SUNDAY 11ST OF NOVEMBER, 4:17PM IN GORDON

Raven


Go Find

eg. Little Penguin, Dingo, Australian Raven, Red Kangaroo, Rosella, and Goanna

Australian Raven

"*Corvus coronoides*"

ANIMALIA | CHORDATA | AVES | undefined | PASSERIFORMES | CORVIDAE | PASSERIFORMES | Corvus coronoides



Heat map of species location

Top search results:

Corvus coronoides
Corvus tasmanicus
Corvus mellori
Ophidion genyopus
Corvus moriorum
Corvus antipodum
Corvus moriorum
Corvus antipodum
Gyrocochlea raveni
Tetragonurus cuvieri

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Information supplied by Atlas of Living Australia website at <http://www.ala.org.au>. Accessed 29 October 2015.

Outcomes

I didn't manage to clean the form after clicking the search button so that when the user typed in a second name, it will load the new data below the first. So the user will need to go back and refresh the page, which isn't the best result and not what I was after. I looked into the method of clearing forms, but I couldn't get it to work on my project.

Overall, I'm happy with the outcome of this assignment, and I have a better understanding of sending multiple API calls and researching a way to display the information. While I felt I spent too long looking into finding the right API and looking into mapping, I no have a better understanding of what is out there web development and how piecing together different API make excellent user experiences.