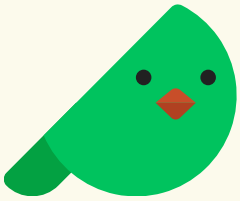
TEAM LOON



picbeak

Olivia Underdah · Bruna Weiss · Mizuho Tohma
Jaspreet Bhatti · Gabriel Watanabe · Yebin Cho

snəweyəɬ leləm̓.
THE COLLEGE OF HIGHER LEARNING.

Langara.
THE COLLEGE OF HIGHER LEARNING.

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Team

Olivia Underdah

Front-end Developer

/oliviaunderdah

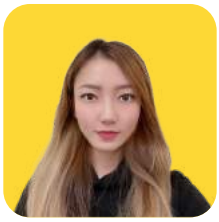
Front-end React Developer with design background, skilled at implementing component-based user interfaces.

Gabriel Watanabe

Full-stack Developer

/gabrielwatanabe

Full-stack Developer skilled at building Front-end by using React and Back-end by writing databases and APIs.



Yebin Cho

Front-end Developer

/yebincho

Front-end Developer with 2+ years experience in graphic design, skilled at building Front-end with React.

Mizuho Tohma

Front-end Developer

/mizuhotohma

Front-end React Developer skilled at building websites and web applications with React.

Bruna Weiss

UX/UI Designer

/brunaweiss

UX Designer with 2+ years experience and skilled in user interface, visual design and illustration.

Jaspreet Bhatti

Full-stack Developer

/ijaspreetbhatti/

Java Full-stack Developer skilled in Angular 8, Redux, Angular Material, Ag-Grid, Express.js, Node.js.

Background

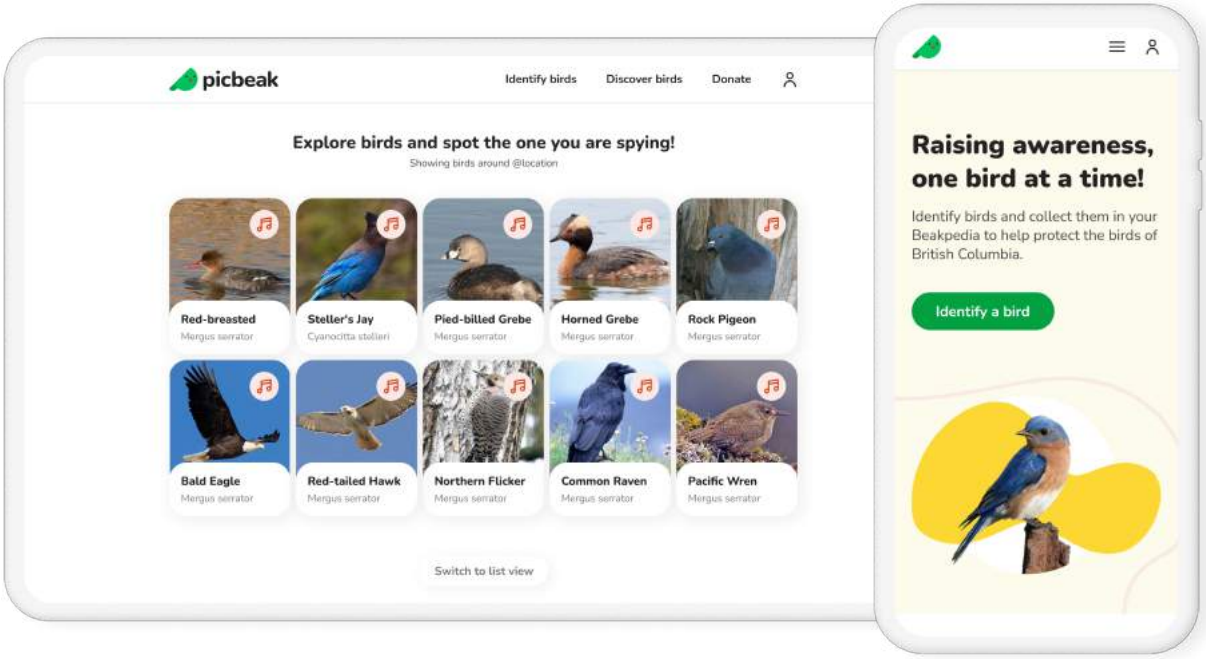
Birds play a big role in our ecosystems and the health of our planet, but many people lack awareness and access to basic information about birds in their region— especially on a child friendly (and fun) platform.

Since 1970 North America has seen a 29% decline in it's bird population— that loss means there are roughly 3 billion less birds gracing our skies today.

This large decrease in bird populations can have far reaching consequences, so increasing awareness of birds and their habitats is even more important.

Children and youth that learn about their environment have a better understanding of how their decisions and actions can affect it—this is key to building a sustainable future.

Solution



Picbeak is an application that provides educational information about region specific bird species, encouraging children to be aware of local birds and endangered species.

By utilizing geo-location, users can identify birds they spot in the wild and add them to their personal virtual 'beakpedia' collection where they can track their progress and unlock new features.

Users are learning about birds, how to protect them and how to deal with wildlife—all while having fun!

Users can also support professional organizations that are working to protect birds by visiting our partner page and selecting organizations to support, they will then be redirected to the organizations' donation page.

Main Features

Identify

Users navigate through potential matches to identify the bird they're spotting via image and audio. Users can selct the bird to view details and add it to their *Beakpedia*.

Discover

Users can explore various bird species with Picbeak's search and filter feature to find birds based on name, conservation status, or location to learn more about birds.

Collect

Logged in users can add birds they've spotted to their *Beakpedia* collection, unlocking new profile portraits and building their own bird photo collection.

Donate

Users can find local organizations that aid in bird conservation to donate to. Picbeak serves as a showcase for them and redirect users to their donation's page.

Business Plan

Opportunities

- Lack of knowledge of local bird species.
- No child focused digital location to share/catalog bird discoveries and find viewing locations.
- Lack of awareness of bird population declines impact on the environment
- No platform that integrates bird focused data and gamification to create an interactive children's platform.

Competitive Advantage

Use of gamification to specifically target children in this educational platform. Profile to collect birds, gallery to add photos of birds you've collected and custom portraits and illustrations as rewards.

Target Market

- Children and their parents/guardians
- Organizations focused on bird conservation
- Zoos
- Birders (avid birdwatchers)

Customer Success

- Number of active users
- Growth of user photo archive
- Number of premium subscribers

Marketing and Sales

- Advertisements on platforms such as TikTok, Twitter, Youtube, and Instagram.
- Partnerships with schools and outdoor education programs/ organizations.

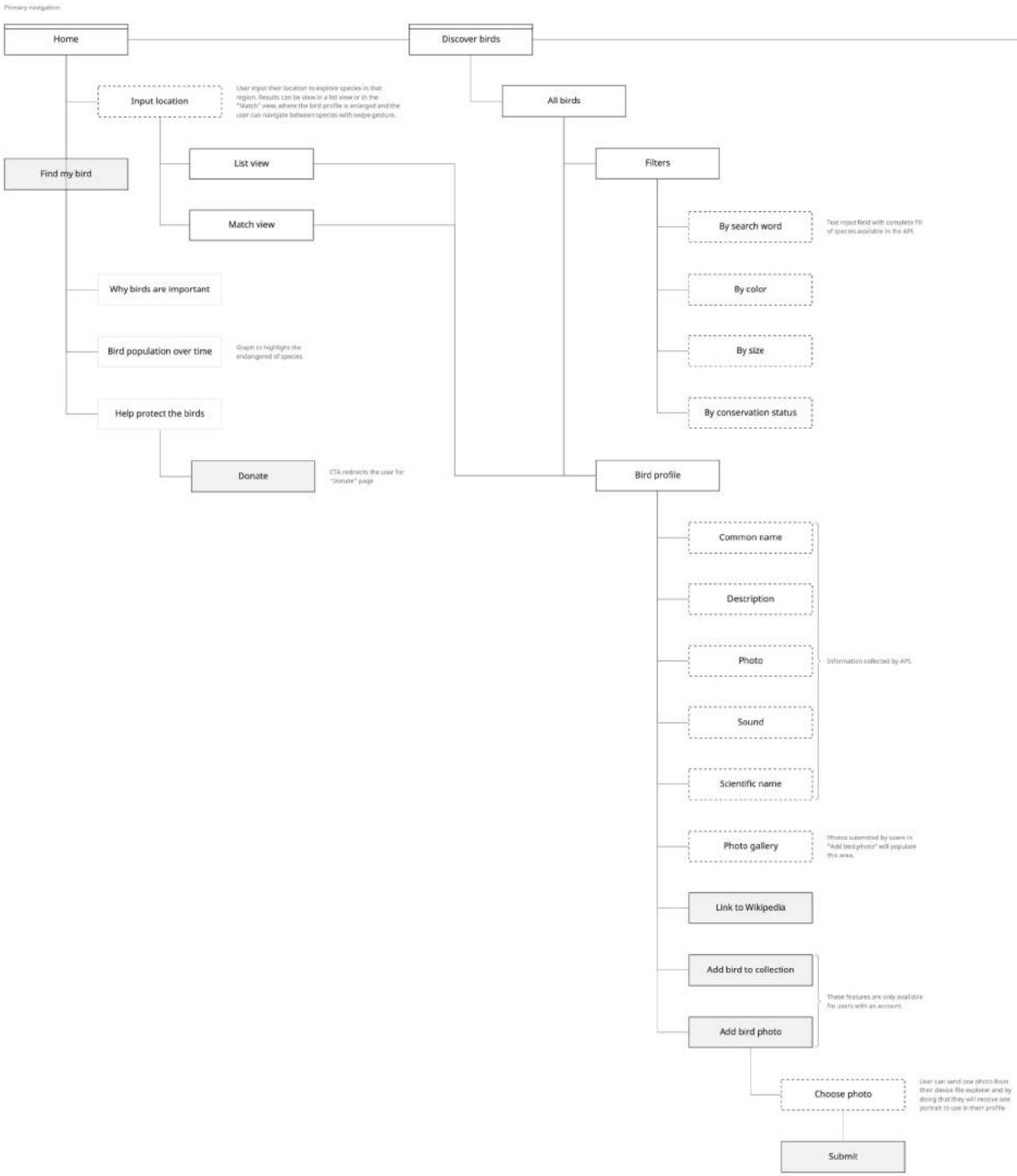
Monetization

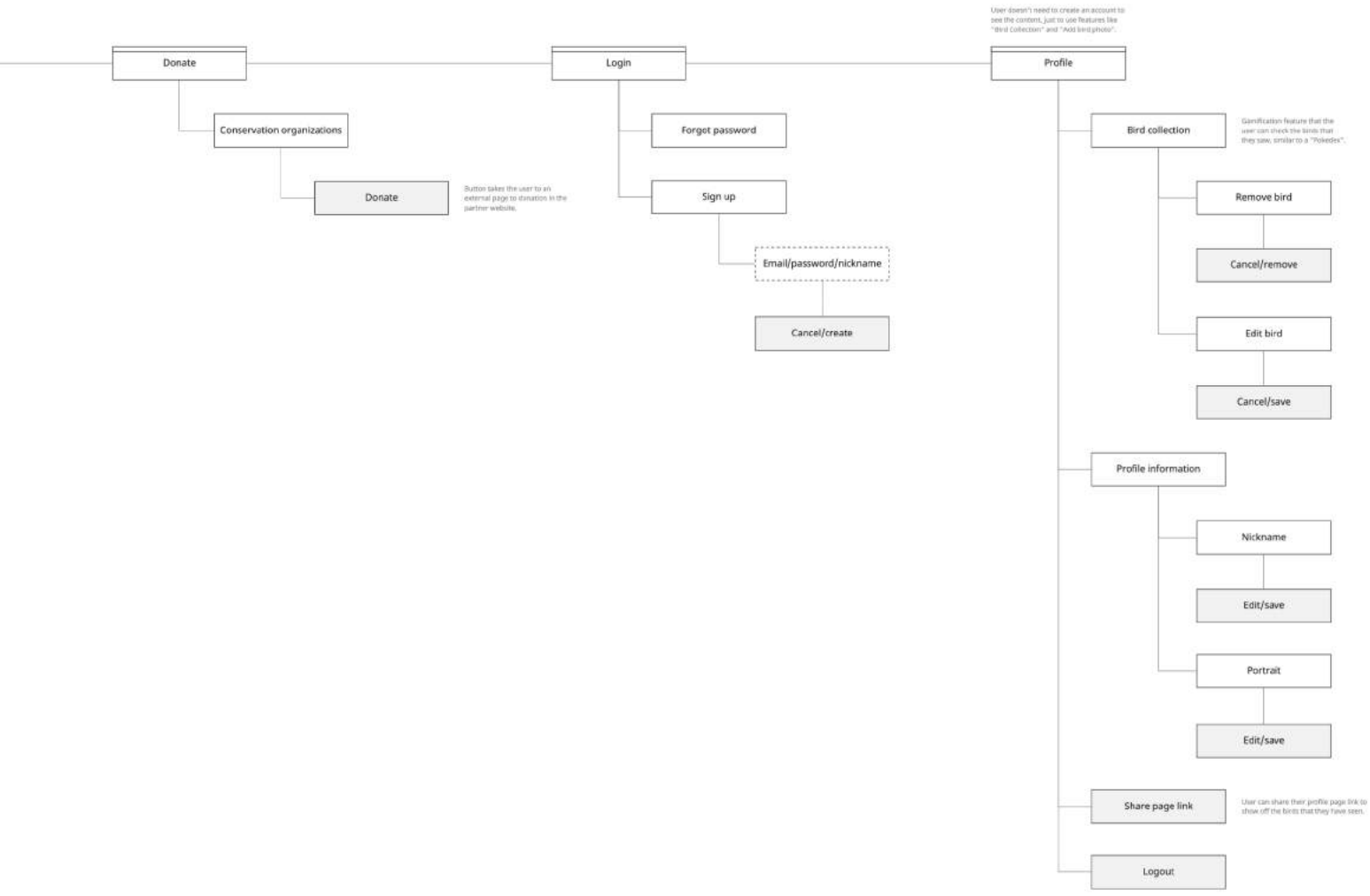
- Partner Listings: Environmental organizations that support bird habitats and populations can pay an annual fee of $250 to be listed on our partner page.
- Freemium Model: Users have access to a limited amount of storage space and have limited collection sizes when using the free model, once the quota is reached users can pay $5/month to upgrade to premium. With the premium level users have unlimited storage space and collection sizes.

Competitors

	picbeak	Wikipedia	The Cornell Lab Merlin	Google
Bird identifier	✓	✗	✓	✓
Discover birds	✓	✓	✓	✓
Gamification features	✓	✗	✗	✗
Child-focused	✓	✗	✗	✗

User Flow


Primary navigation
Home
Discover birds
Input location
User input their location to explore species in that region. Results can be view in a list view or in the "Match" view, where the bird profile is enlarged and the user can navigate between species with swipe gesture.
All birds
Find my bird
List view
Filters
Match view
By search word
Text input field with complete fill of species available in the API.
By color
By size
By conservation status
Why birds are important
Bird population over time
Graph to highlight the endangered of species.
Help protect the birds
Donate
CTA redirects the user for "Donate" page
Bird profile
Common name
Description
Photo
Information collected by API.
Sound
Scientific name
Photo gallery
Photos submitted by users in "Add bird photo" will populate this area.
Link to Wikipedia
Add bird to collection
These features are only available for users with an account.
Add bird photo
Choose photo
User can send one photo from their device file explorer and by doing that they will receive one portrait to use in their profile.
Submit


User doesn't need to create an account to see the content, just to use features like "Bird Collection" and "Add bird photo".
Donate
Conservation organizations
Donate
Button takes the user to an external page to donation in the partner website.
Login
Forget password
Sign up
Email/password/nickname
Cancel/create
Profile
Bird collection
Gamification feature that the user can check the birds that they saw, similar to a "Pokedex".
Remove bird
Cancel/remove
Edit bird
Cancel/save
Profile information
Nickname
Edit/save
Portrait
Edit/save
Share page link
User can share their profile page link to show off the birds that they have seen.
Logout

Wireframes

Picbeak
Identify birds
Discover birds
Donate
Raising awareness, one bird at a time!
Identify birds and collect them in your Beakpedia to help protect the birds of British Columbia.
Help me identify a bird
Where do you see the bird?
enter location
More than a connection to nature, birds supports a healthy environment
Lorem ipsum dolor sit amet
Lorem ipsum dolor sit amet
Lorem ipsum dolor sit amet
Monitoring the decline of birds population for conservation action
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua
How you can help to conserve birds
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt.
Donate
© Picbeak 2022

Picbeak
Raising awareness, one bird at a time!
Identify birds and collect them in your Beakpedia to help protect the birds of British Columbia.
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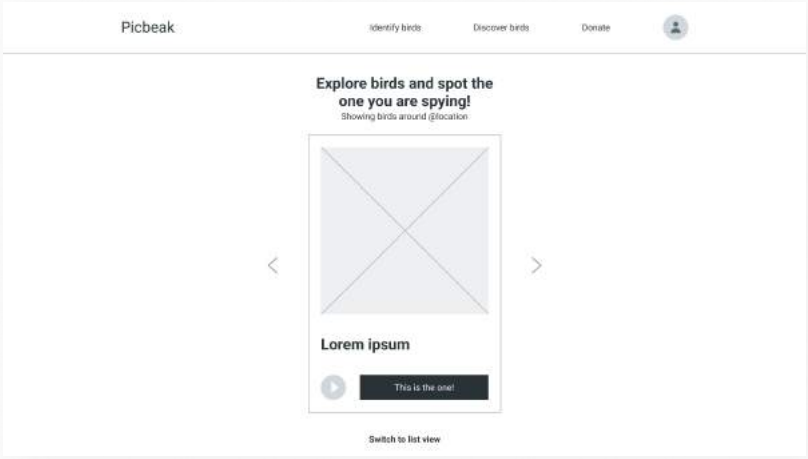
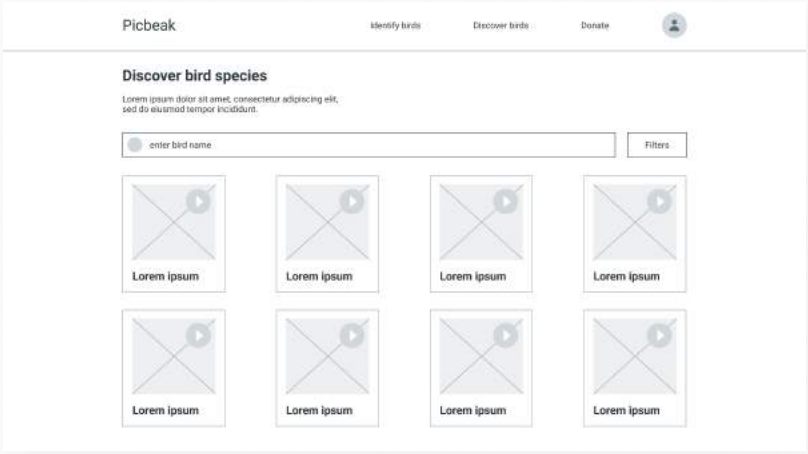
Lorem ipsum dolor sit amet
Lorem ipsum dolor sit amet
Monitoring the decline of birds population for conservation action
How you can help to conserve birds
Donate
© Picbeak 2022


Picbeak
Identify birds
Discover birds
Donate
Explore birds and spot the one you are spying!
Showing birds around @location
Lorem ipsum
This is the one!
Switch to list view

Picbeak
Explore birds and spot the one you are spying!
Showing birds around @location
Lorem ipsum
This is the one!
Switch to list view


Picbeak
Identify birds
Discover birds
Donate
Discover bird species
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt.
enter bird name
Filters
Lorem ipsum
Lorem ipsum
Lorem ipsum
Lorem ipsum
Lorem ipsum
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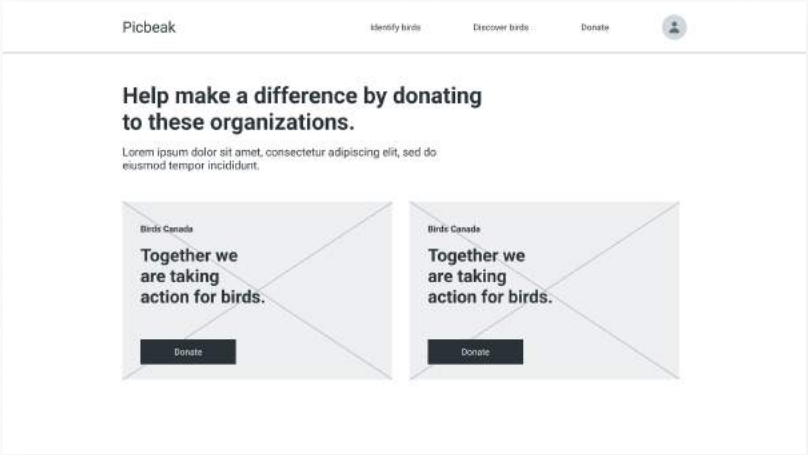
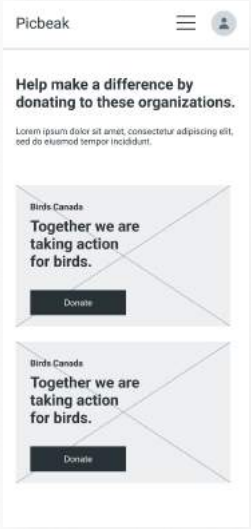
Lorem ipsum

Picbeak
Discover bird species
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt.
enter bird name
Filters
Lorem ipsum
Lorem ipsum
Lorem ipsum
Lorem ipsum


Picbeak
Identify birds
Discover birds
Donate
Help make a difference by donating to these organizations.
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt.
Birds Canada
Together we are taking action for birds.
Donate
Birds Canada
Together we are taking action for birds.
Donate


Picbeak
Help make a difference by donating to these organizations.
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt.
Birds Canada
Together we are taking action for birds.
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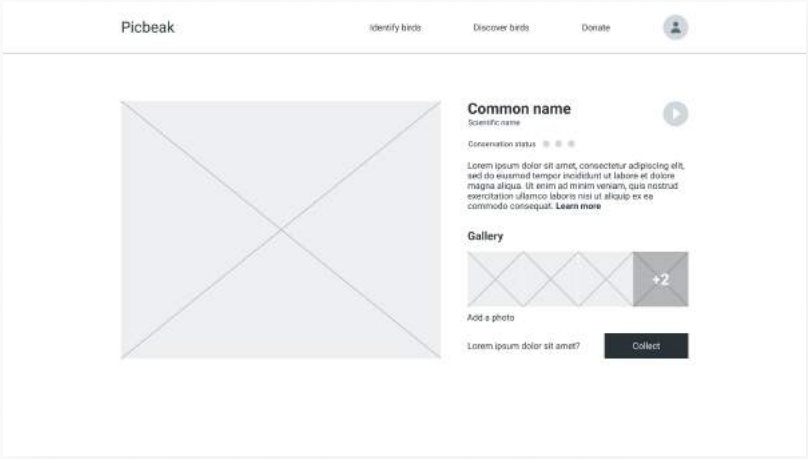
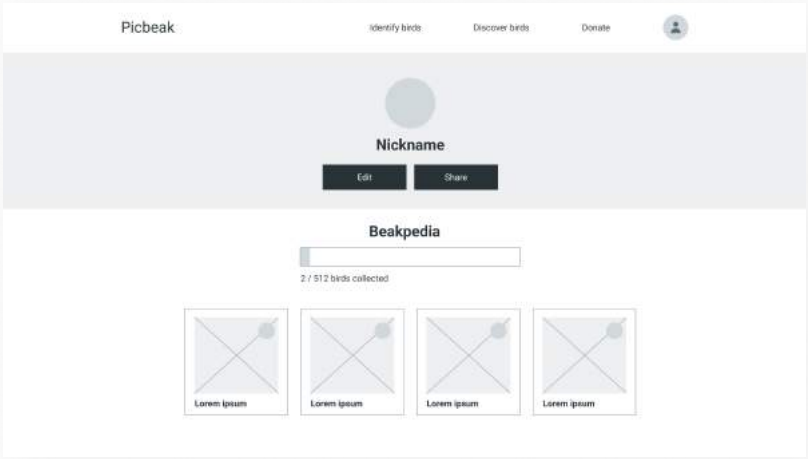
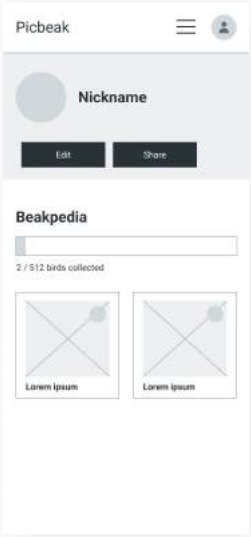
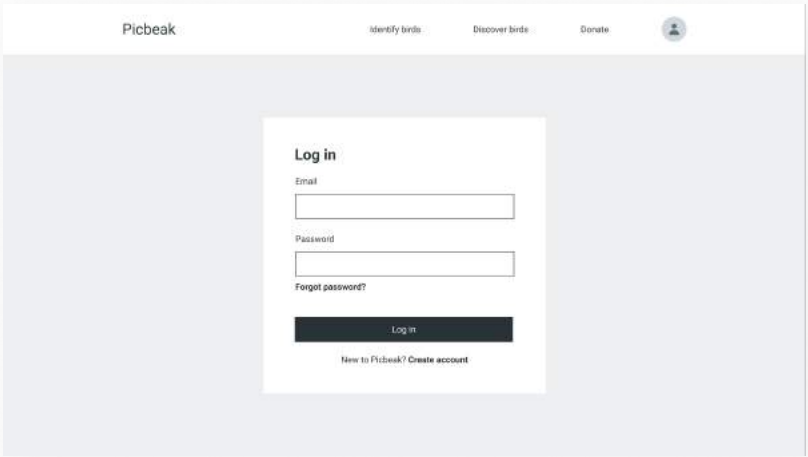
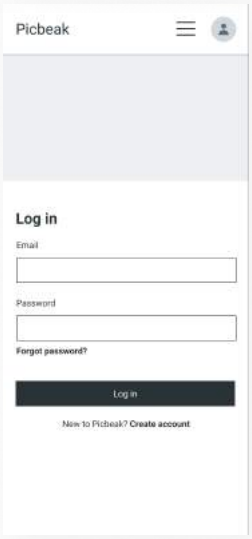

Picbeak
Identify birds
Discover birds
Donate
Common name
Scientific name
Conservation status
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Learn more
Gallery
+2
Add a photo
Lorem ipsum dolor sit amet?
Collect

Picbeak
Common name
Scientific name
Conservation status
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Learn more
Gallery
+2
Add a photo
Lorem ipsum dolor sit amet?
Collect


Picbeak
Identify birds
Discover birds
Donate
Nickname
Edit
Share
Beakpedia
2 / 512 birds collected
Lorem ipsum
Lorem ipsum
Lorem ipsum
Lorem ipsum


Picbeak
Nickname
Edit
Share
Beakpedia
2 / 512 birds collected
Lorem ipsum
Lorem ipsum


Picbeak
Identify birds
Discover birds
Donate
Log in
Email
Password
Forgot password?
Log in
New to Picbeak? Create account


Picbeak
Log in
Email
Password
Forgot password?
Log in
New to Picbeak? Create account

Brand

The most recognizable element—our brand's name comes from combining the words picture/pick + beak.

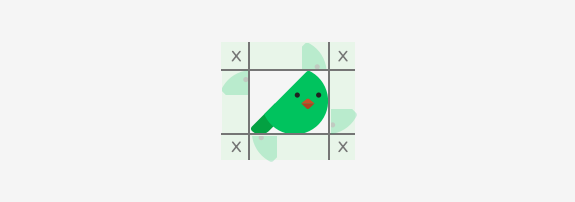
Our logo has an inspirational and quirky look by representing the P of our brand with our mascot: Bea, the bird.

Logos

Primary Logo

x = height of letter a

Icon Logo



x = 1/3 of the width

Dos and Don'ts

Apply logo with white text on dark backgrounds.

Apply logo with black text on light backgrounds.

Use Icon when it’s not possible to use the full.

Don't use the logo on color backgrounds.

Don’t modify or distort the logo.

Don’t use the logo with image backgrounds.

User Interface Kit

Fav icon

Colors

Labels

Low conservation concern

High conservation concern

Moderate conservation concern

Icons

Buttons

Default

Primary big | Primary | Secondary | Terciary

Hover

Primary big | Primary | Secondary | Terciary

Disabled

Primary big | Primary | Secondary | Terciary

Input fields

Label

Input

Label

Input

Label

Input

Error

Typography

Nunito Regular
ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz1234567890

Nunito Bold
ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz1234567890

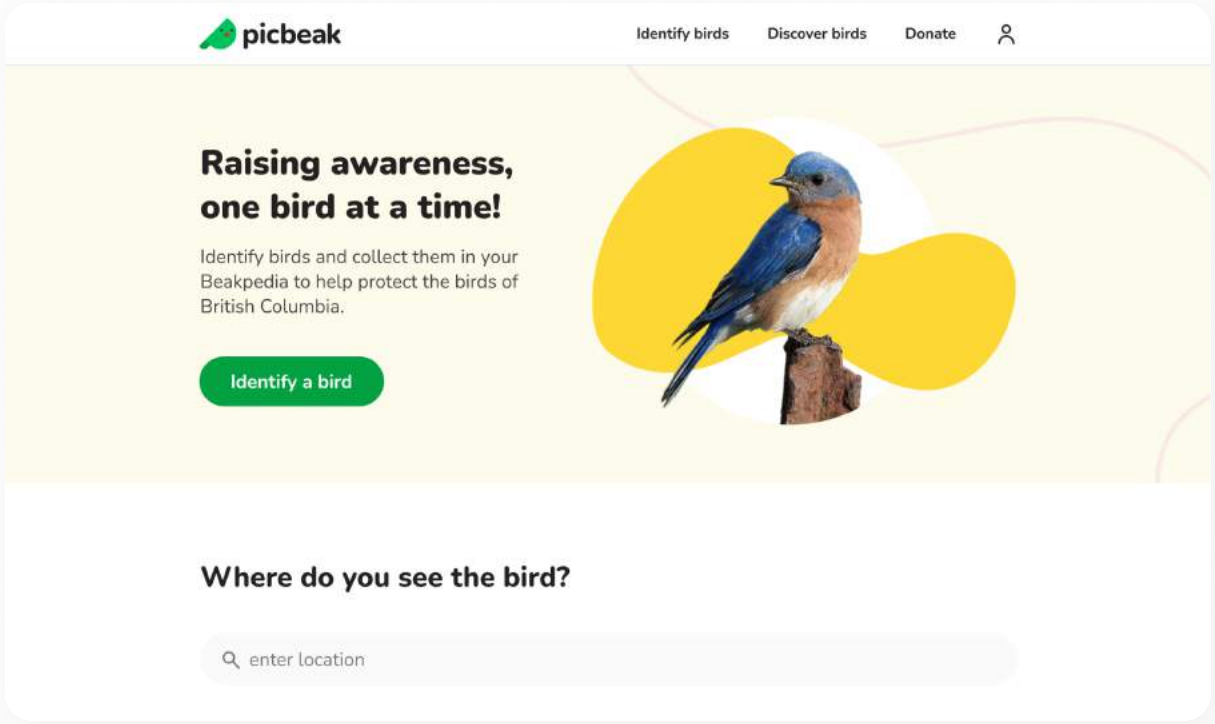
Nunito ExtraBold
ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz1234567890

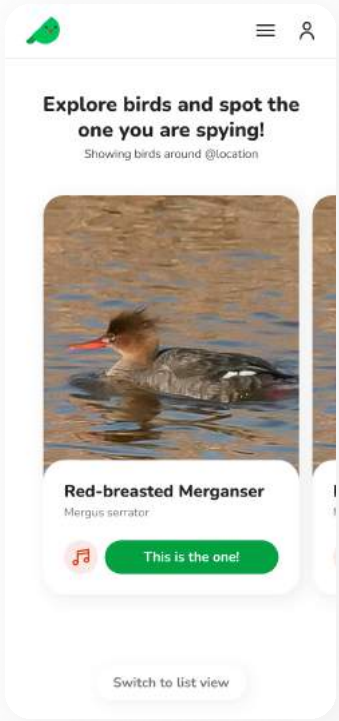
Illustrations

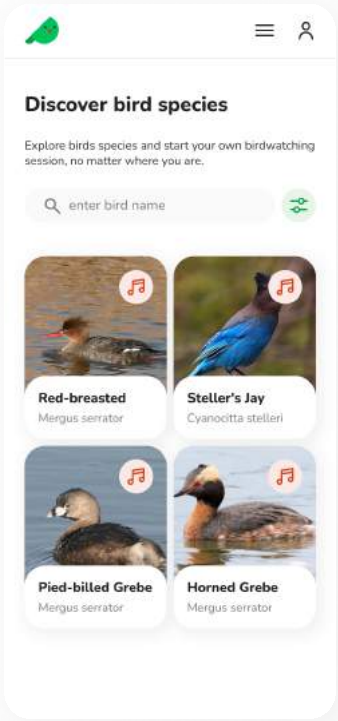
The illustrations created by our team's designer connect our product with children by conveying a friendly and playful narrative.

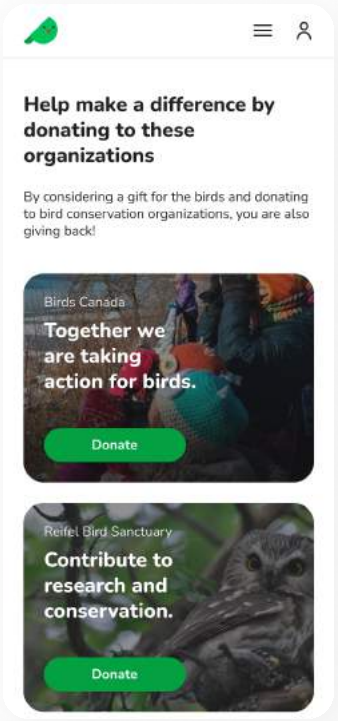
We use illustrations to represent our brand and personality, speak directly to users, tell stories, and indicate the product's state, like error and success.

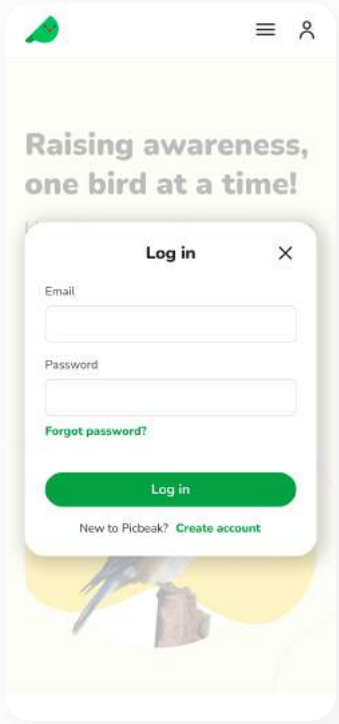
Mock-ups

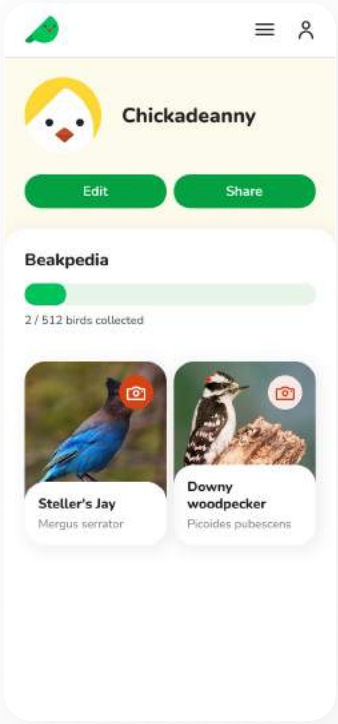

picbeak
Identify birds
Discover birds
Donate
Raising awareness, one bird at a time!
Identify birds and collect them in your Beakpedia to help protect the birds of British Columbia.
Identify a bird
Where do you see the bird?
enter location

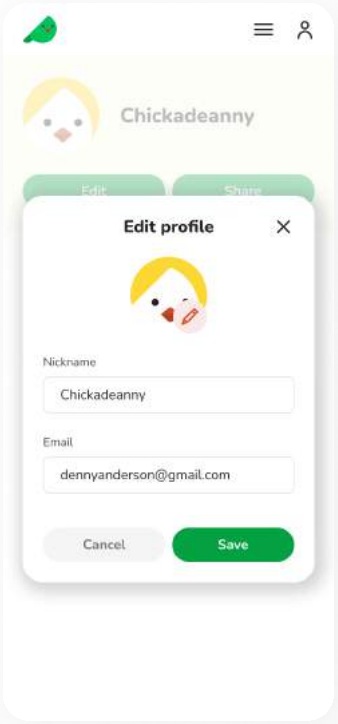

Explore birds and spot the one you are spying!
Showing birds around @location
Red-breasted Merganser
Mergus serrator
This is the one!
Switch to list view


Discover bird species
Explore birds species and start your own birdwatching session, no matter where you are.
enter bird name
Red-breasted
Mergus serrator
Steller's Jay
Cyanocitta stelleri
Pied-billed Grebe
Mergus serrator
Horned Grebe
Mergus serrator

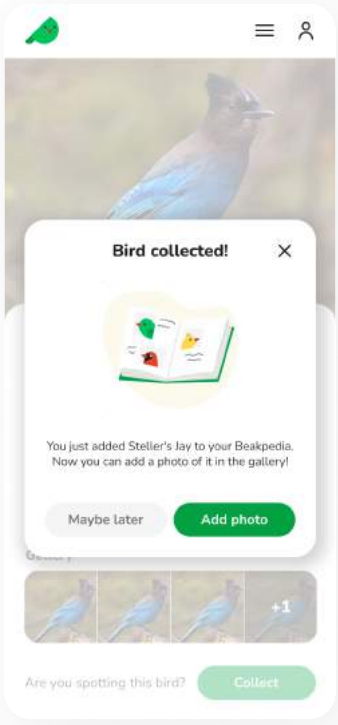

Help make a difference by donating to these organizations
By considering a gift for the birds and donating to bird conservation organizations, you are also giving back!
Birds Canada
Together we are taking action for birds.
Donate
Reifel Bird Sanctuary
Contribute to research and conservation.
Donate


Raising awareness, one bird at a time!
Log in
Email
Password
Forgot password?
Log in
New to Picbeak? Create account


Chickadeanny
Edit
Share
Beakpedia
2 / 512 birds collected
Steller's Jay
Mergus serrator
Downy woodpecker
Picoides pubescens


Chickadeanny
Edit profile
Nickname
Chickadeanny
Email
dennyanderson@gmail.com
Cancel
Save

Steller's Jay
Cyanocitta stelleri
Low conservation concern
A large, dark jay of evergreen forests in the mountainous West. Steller's Jays are common in forest wildernesses but are also fixtures of campgrounds, parklands, and backyards, where they are quick to spy bird feeders as well as unattended picnic items. Learn more
Gallery
+1
Are you spotting this bird?
Collect


Bird collected!
You just added Steller's Jay to your Beakpedia. Now you can add a photo of it in the gallery!
Maybe later
Add photo
+1
Are you spotting this bird?
Collect

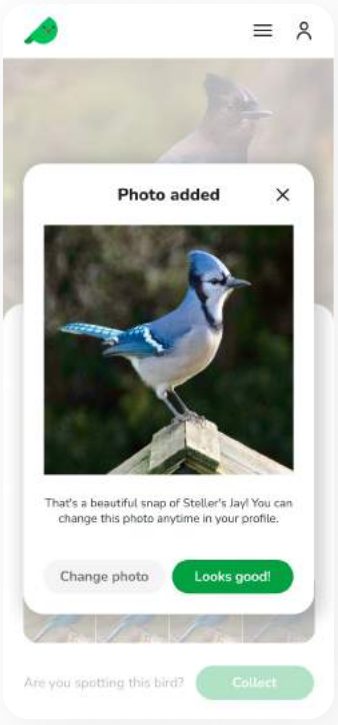
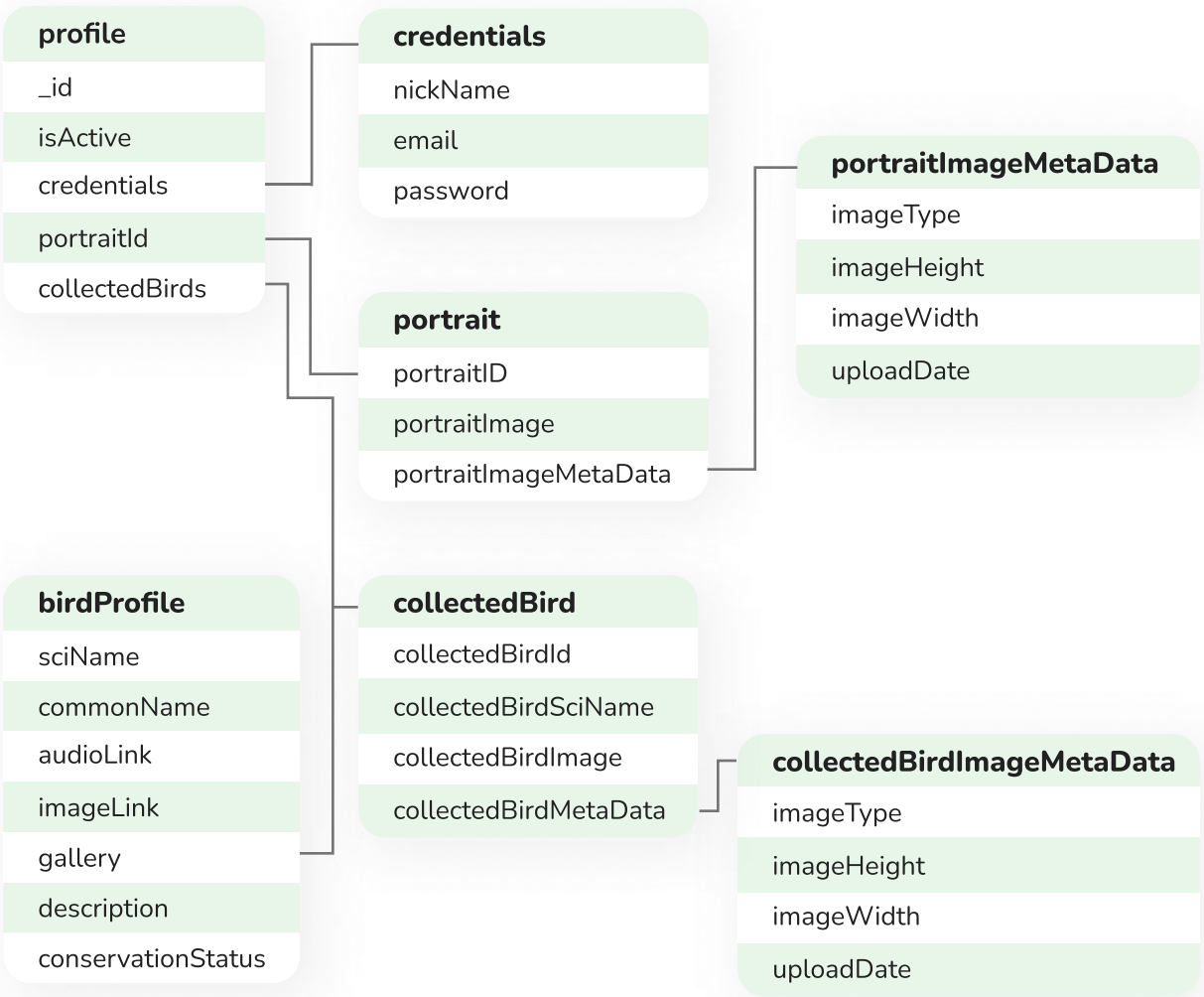


Photo added
That's a beautiful snap of Steller's Jay! You can change this photo anytime in your profile.
Change photo
Looks good!
Are you spotting this bird?
Collect

Data Structure

Picbeaks's MongoDB collection stores both user data and bird data from external APIs. The bird data accessed is relatively stable and consistent, so it is called on the back-end and cached in MongoDB for periodic updates to increase the application's speed and performance. User data includes profile information, image collections and portrait earnings.



Data Implementation

Where does Picbeak's data come from?

Ebird API → Bird location data, scientific name & common name

NatureServe API → Bird conservation status

Flickr API → Bird images

Wikipedia API → Bird detail descriptions

Xeno-canto API → Bird sounds

How can users interact with Picbeak's data?

Picbeak users can interact with data through location-based bird data display, detailed bird profiles based on selected bird, and through text and filtered search options.

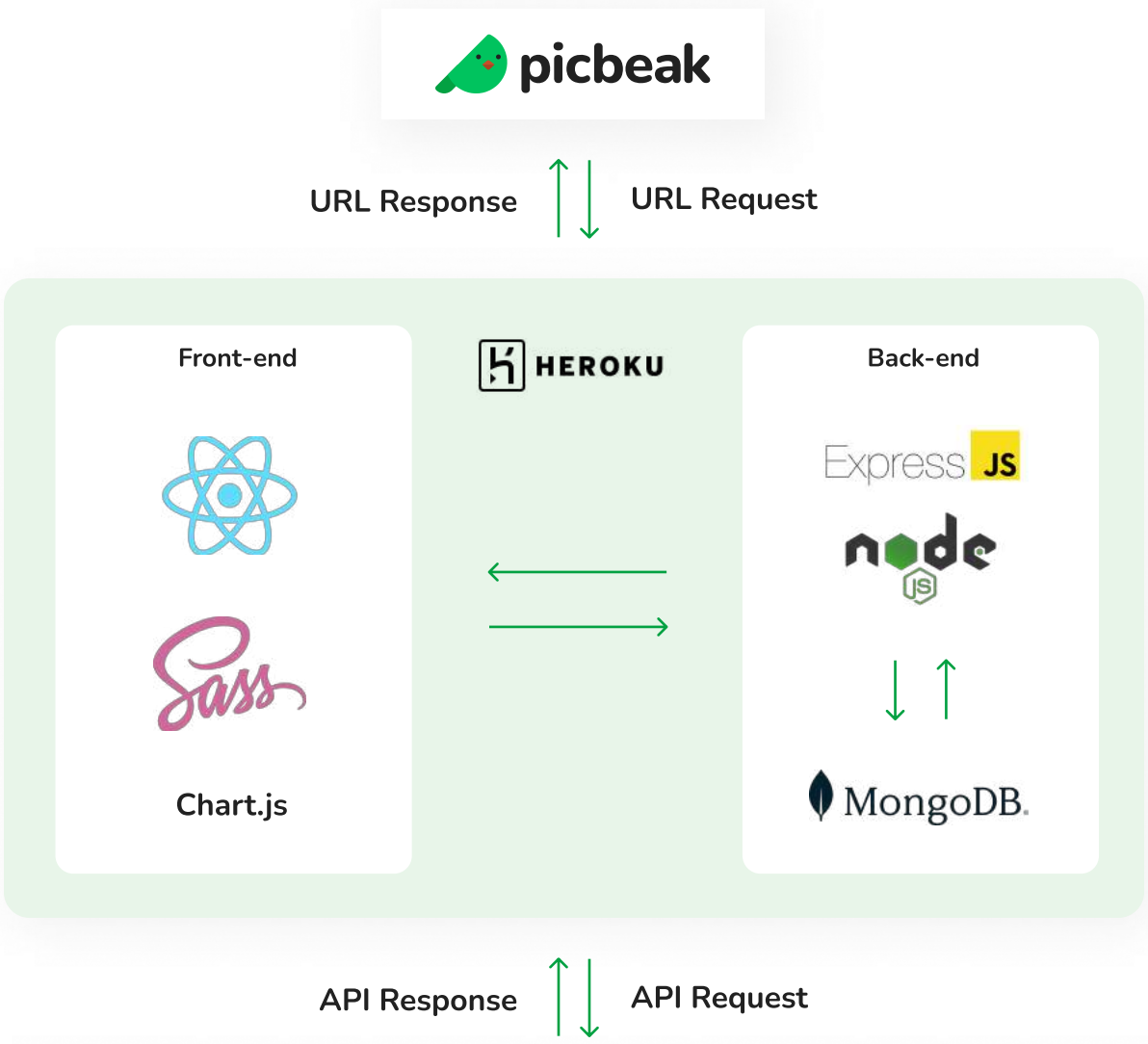
API Endpoints

Picbeak uses MongoDB to cache bird data gathered from external API's and has built internal API's endpoints to access all bird and user data.

Process	API Endpoint	Data
Identify Birds	/birds/:location	Location based view of potential bird matches
Get Bird Detail	/birds/:sciName	Detailed view of bird based on scientific name
Filter Birds	/birds	Filtered view of birds based on user input
User Profile	/profiles/:id	User profile details
Image Gallery	/birds/:sciName/gallery	User uploaded images for selected bird
User Collection	/collectedBirds/:author	User collection of birds 'collected' in app

System Architecture

Picbeak's front-end is implemented using the ReactJS framework, Sass and Chart.js. While the back-end is implemented by using ExpressJS and NodeJS to communicate with our external API's and MongoDB. The entire web application is hosted on Heroku.



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