BIODIVERSITY IN SPECIES

A study on species of India through Data Visualisation

Srivathsan Nayak 19BCE2015
Bhavya Harchandani 19BCE2016
Shruti Gupta 19BCE2061

PROBLEM

01

To evaluate the status of species in our country.

02

To infer the importance of ecological diversity.

03

To represent the trends related to Indian biodiversity.

VALIDATION

DOMAIN LEVEL

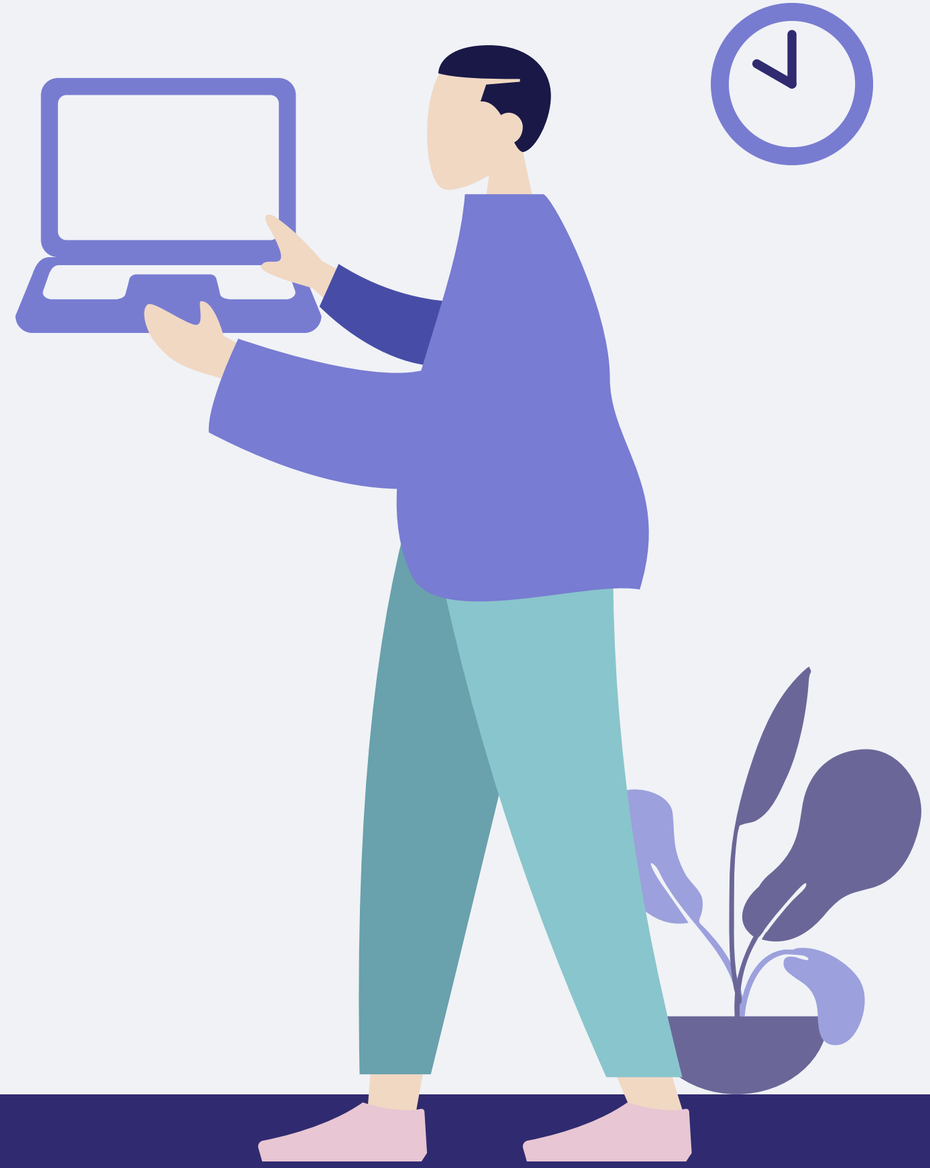
Target users consist of Wildlife Photographers who want to check for specific species in a region, Nature enthusiasts who want to check the IUCN status of species for conservation of species. The idioms can be also used to spread awareness amongst students about the declining rate of species or what kind of species are endemic to India. The target user domain was selected after going through questionnaires and research papers.

TASK AND ABSTRACTION LEVEL

We have analysed the requirements of our target audience and their expectations from our project. This research helped us identify the type of data essential for our project. The users need an attractive and easy to interpret website so that information can be viewed effortlessly. The data for our dataset is taken from government portals and other trusted sources. It was prepared such that the users can perceive maximum information without wasting their time. Our idioms have been prepared by taking the users' queries in consideration and they visually solve most of them.

VISUAL ENCODING

Due to the abstract nature of gathered data, we had multiple options for visual encoding. We encoded data based on multiple visual attributes such as size, shape, colour, grouping, position, etc. The idiom design is dynamic as the visual encodings respond to real-time changes done by the user in order to get a better understanding of the graphs. We have provided multiple idioms as well in order to give the user more flexibility.



ALGORITHM

The algorithms used in our project play an important role and affect factors such as computation time and output. An instance would be the data collection technique, for which we used CSV (comma-separated values) instead of data frame. This influenced the computation time positively as data frames tend to be less effective than CSVs with respect to execution time.

Domain Situation

Target users include wildlife photographers, nature enthusiasts and students.

Data/Task Abstraction

Users require data abstraction in the form of websites and visual idioms.

Visual Encoding/Interaction Idiom

Dynamic visual encoding used for interactive graphs.

Algorithm

Data stored in CSV to reduce computational time.
Managed computation time by reducing complexity of code.

The Team

Srivathsan B. Nayak
19BCE2015

Bhavya Harchandani
19BCE2016

Shruti Gupta
19BCE2061