Project Design Phase-I - Solution Fit

Date	01 October 2022
Team ID	PNT2022TMID30275
Project Name	Project - Digital Naturalist - AI Enabled tool for Biodiversity Researchers
Maximum Marks	

Define CS, fit into CC

1. CUSTOMER SEGMENT(S) CS

- Botanist
- Zoologist
- Ornithologist
- Entomologist
- Arachnologist
- Herpetologist
- Ichthyologist
- Marine biologist
- Cetologist
- Research people
- Dendrophile
- Forester
- Mountaineer
- Sailor
- Students
- Tourist people and travellers

6. CUSTOMER CONSTRAINTS CC

- Subscription cost
- Network issues
- Misunderstanding the class of species
- Making observations among species
- Finding relationships among breeds

5. AVAILABLE SOLUTIONS AS

- Replacing traditional taxonomical practices to a digital driven application
- Enhancing the user experience with modern algorithms
- Usage of AI to tackle difficulties in identification of breeds

What have they tried in the past?

- Community for mapping and sharing observations of biodiversity
- Pros - Improved access to species data
- Cons - Lack of resources

Explore AS, differentiate

Focus on J&P, tap into BE, understand RC

2. JOBS-TO-BE-DONE / PROBLEMS J&P

- Understand the biological specimen
- Life towards green environment
- Save the wild life
- Concern towards endangered species
- Living in tune with nature
- Feel the greenery in their hands
- Reduce animal human conflicts
- Identification of rare species

9. PROBLEM ROOT CAUSE RC

1. Complexities in
   Observation
   Relationship
   Research
2. To help naturalist to identify the species in a better way and to have a sufficient knowledge of the required species
3. To promote sustainable world

7. BEHAVIOUR BE

DIRECTLY RELATED

1. To search for the particular specimen in books or websites
2. To compare with the species that you know already
3. Asking the native people about that species

INDIRECTLY RELATED

1. Volunteering like NCC
2. Finding the rare species
3. Save endangered species

Focus on J&P, tap into BE, understand RC

Identify strong TR & EM

3. TRIGGERS

TR

- Efficient way to experience nature
- Find medicinal value
- Save nature
- Back to green
- Opportunity to become close to nature
- Expanding their lifespan
- Exploring the world
- Lack of communication
- Experiencing the modern age of naturalism

4. EMOTIONS: BEFORE / AFTER

EM

- Knowledge about odd race
- Imbalanced world to sustainable world
- CO2 to O2
- Accumulation of waste to renewable energy
- Communication with animals
  Low to high
- Promote Zoolingualism

10. YOUR SOLUTION

SL

This problem can be solved using Artificial Intelligence. Artificial intelligence can be used to identify all the classes and species of animals and plants based on the set of databases. We use deep learning approach to train a long and heavy data that are useful for a naturalist to classify images based on the nature of species.

8. CHANNELS of BEHAVIOUR

CH

8.1. ONLINE

- Search on internet
- Capture image and scan
- Record the sound and match

8.2. OFFLINE

- Acts as a biological thesaurus

Identify strong TR & EM