### **Digital Naturalist - AI Enabled tool for Biodiversity Researchers**

**Proposed Solution Document**

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**Proposed Solution**

**Introduction:**

**Flora:**

The term flora in Latin means “Goddess of the Flower.” Flora is a collective term for a group of plant life found in a particular region. The whole plant kingdom is represented by this name. Flora is classified and differentiated based on many factors. The best one among them is the area in which they grow or are found. Some grow in desert regions or in water, some are found in hilly areas while some are endemic to a specific geographic location. According to the place at which they grow, they have adaptations also. For example, Cactus plants are naturally seen in deserts. They have adaptations like modified leaves or prickles to preserve water and protect themselves from predators. The agricultural flora consists of plants cultivated by men for their use. Horticulture is the practice of growing ornamental and decorative flowers, which are also known as garden flora.

**Fauna:**

Fauna represents the animal life indigenous to a region. There are many explanations regarding the origin of the word. As per Roman mythology, Fauna or “*Faunus*” is the name of the goddess of fertility. Another source is “*Fauns*” which means “*Forest spirits”*

Animal kingdom comprises a variety of animal life forms. Hence, the classification of fauna is much more complex than the floral division. Therefore, for ease of classification;

* Birds are categorized under the name Avifauna.
* Fishes under PisciFauna.
* Microorganisms including bacteria and virus are generally considered under animal kingdom, they are known as Microfauna.
* All unknown and undiscovered animals are named as cryptofauna.

**Problem Statement:**

John is a student. He has interest to know about fora and fauna but, he doesn't know the ways to know about it**.**

It Network is slow is the sometimes or somewhere so, he didn’t get result for the flora and fauna**.**

**Idea/Solution Description:**

* John is search to gather information in Internet
* John was use to know about the fora or fauna in some available application
* He searches about fora and fauna in social media
* He is consult about with the Naturalist
* Say and ask to friends and families

**Novelty:**

* If you specify the features of respective flora and fauna, it will display results accordingly
* Provides to offline search results
* Download the categorize wise If you needed.
* Provides to translate in own languages.
* Communicate with another person/naturalist
* You can Upload your information with newsfeed.
* You can access the flora’s and fauna’s location in nearest places.

**Social Impact:**

* Develop the knowledge about Flora and Fauna in the general peoples
* Being able to identify the flora and fauna around us often leads to an interest in protecting wild spaces.
* Build a communication between the naturalist.

**Business Impact:**

* Premium access to the offline search results.
* Collaboration to the Bio-Diversity access the information about of the flora and fauna.
* Can make money through subscription based.
* Partnership with many laboratories and scientists around the world.

**Scalability of solution:**

1. Improved CNN design. There much more research and practice are needed to optimize the design.

2. Improve the dataset and add more data.

3. Specific Identification of duplicate flower which is same to look at.

4. We have plan to release this app on Google Playstore.