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

**Problem Solution Architecture**

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**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.

**Solution Architecture:**

**Functionality:**

* A network issues areas we provide an offline result.
* Our application\website not only need an image for an information. It we provide a categorical search to relevant flora and fauna.
* We provide customers understandable languages.
* We have provided the valid information.
* If you need a flower, we will provide it's location depend upon another user search results.
* We provide user can be add the additional information in our application
* We provide chatting facility for user communicate with the natural specialist.

**Reliability:**

* User cannot access the internet in all time, so we provide an offline result.
* User image not quality it always, so we provide it a categorical search.
* Needed information is not enough for customer so users communicate a natural specialist.

**Usability:**

* Increase knowledge about the fauna and flora.
* Know about the various of the flora and fauna.
* Know medical uses of the plants and flowers.

**Design:**

