DIGITAL NATURALIST-AI ENABLED TOOLS FOR BIODIVERSITY RESEARCHERS TEAM ID:

PNT2022TMID50366

Abstract:

A naturalist is someone who studies the patterns of nature, identifies a different kind of flora and fauna in nature. Being able to identify the flora and fauna around us often leads to an interest in protecting wild spaces, and collecting and sharing information about the species we see on our travels is very useful for conservation groups like NCC.

Biodiversity:

Biodiversity is all the different kinds of life you'll find in one area—the variety of animals, plants, fungi, and even microorganisms like bacteria that make up our natural world. Each of these species and organisms work together in ecosystems, like an intricate web, to maintain balance and support life.

Aim of Biodiversity:

Biodiversity education projects aim to break this harmful cycle. A primary objective of many initiatives of this nature is to increase species literacy. Species literacy involves a broad and deep knowledge about species, starting with identification skills. Yet, species literacy also involves awareness of species diversity, positioning in the ecological food chain, natural life environment, lifecycle knowledge, knowledge of origins, and conservation status

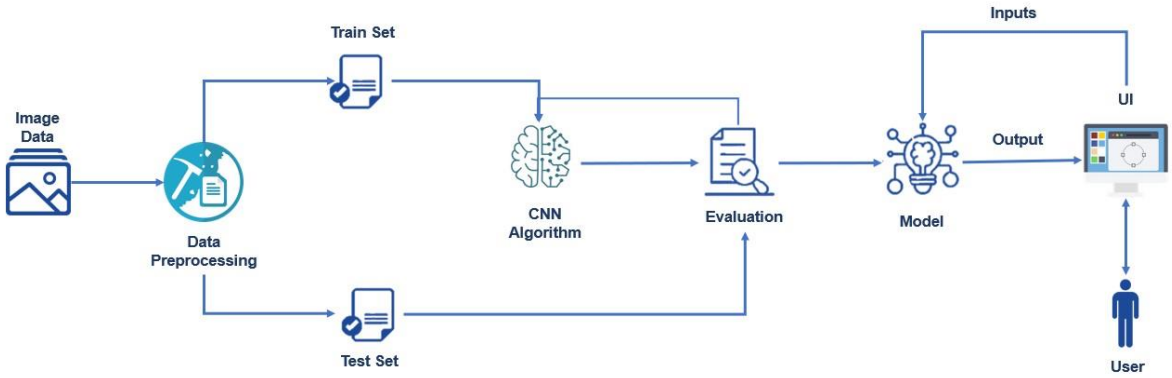
Purpose:

When venturing into the woods, field naturalists usually rely on common approaches like always carrying a guidebook around everywhere or seeking help from experienced ornithologists. There should be a handy tool for them to capture, identify and share the beauty to the outside world.

Field naturalists can only use this web app from anywhere to identify the birds, flowers, mammals and other species they see on their hikes, canoe trips and other excursions.

In this project, we are creating a web application which uses a deep learning model, trained on different species of birds, flowers and mammals and get the prediction of the bird when an image is been given.

Technical Architecture:



Advantages of this app:

- By using this web application not only the field naturalist but also normal people can identify and know about the different kinds species in animals and plants.
- It will help people to develop their knowledge and learn new things about biodiversity.

Conclusion:

The use of this application may open opportunities to build knowledge, not just in biodiversity but also in AI. We believe that even data collection can become part of the educational activities, where participants engage with the environment to better understand how computers themselves learn. Educating people to comprehend the basics in AI will also increase the likelihood of a more diversified societal debate – including diverse gender, social class, and ethnicity. As in biology, diversity in AI will be critical to building a more comprehensive portrait of our plants, animals, landscapes, ethnicities, and cultural diversity.

Reference:

- Aldhebiani AY (2018) Species concept and speciation. Saudi J Biol Sci 25:437–440.
- Balmford A (2002) why conservationists should heed Pokemon. Science 295:22367
- European Commission (2013) Attitudes towards biodiversity. Flash Eurobarometer 379:1–145