**Literature Survey**

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

Presented By

G.Rahulraja

B.Ranjith Kumar

KIT AND KIM TECHNICAL

CAMPUS, KARAIKUDI

**ABSTRACT**

The increasing availability of digital images, coupled with sophisticated artificial intelligence (AI) techniques for image classification, presents an exciting opportunity for biodiversity researchers to create new datasets of species observations. We investigated whether an AI plant species classifier could extract previously unexploited biodiversity data from social media photos (Flickr). We found over 60,000 geolocated images tagged with the keyword ‘‘flower’’ across an urban and rural location in the UK and classified these using AI, reviewing these identifications and assessing the representativeness of images. Images were predominantly biodiversity focused, showing single species. Non-native garden plants dominated, particularly in the urban setting. The AI classifier performed best when photos were focused on single native species in wild situations but also performed well at higher taxonomic levels (genus and family), even when images substantially deviated from this. We present a checklist of questions that should be considered when undertaking a similar analysis.

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| **Book/**  **Journal** | **Author’s Name** | **Inference** |
| Photographic Atlas of Botany and Guide to Plant Identification | Janet R. Sullivan | The Objective of this Book is Based on the author’s very useful and popular Photographic Atlas of Entomology and Guide to Insect Identiﬁcation, the Photographic Atlas of Botany is a combination illustrated glossary of botanical terminology and  reference on vascular plant families. |
| Flora – Inside the Secret World of plants | DK, Royal Botanic Gardens | The Objective of this book is Let the experts at the Royal Botanic Gardens guide you around the beautiful and mysterious world that is the plant kingdom. From regulating the air we breathe to providing food, clothes, fuels, and medicines – plants are fundamental to our lives. Discover an extraordinary diversity of species, which includes a grass that grows a meter a day, roots that breathe air, and "queen of the night" cactuses whose rare blooms vanish before dawn. In a combination of art and science, Flora celebrates plants from majestic trees to microscopic algae, explaining how they germinate, grow, and reproduce.  It presents species that have evolved to accommodate pollinating insects such as the foxglove, and plants that have adapted to flourish in even the most hostile of habitats. |

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| **Book/**  **Journal** | **Author’s Name** | **Inference** |
| Latin Of Gardeners – Over 3000 Plant Names Explained and Explored | Lorraine Harrison | Since Latin became the standard language for plant naming in the eighteenth century, it has been intrinsically linked with botany. And while mastery of the classical language may not be a prerequisite for tending perennials, all gardeners stand to benefit from learning a bit of Latin and its conventions in the field. Without it, they might buy a Hellebores foetidus and be unprepared for its fetid smell, or a Potentilla reptans with the expectation that it will stand straight as a sentinel rather than creep along the ground.An essential addition to the gardener’s library, this colorful, fully illustrated book details the history of naming plants, provides an overview of Latin naming conventions, and offers guidelines for pronunciation. Readers will learn to identify Latin terms that indicate the provenance of a given plant and provide clues to its color, shape, fragrance, taste, behavior, functions, and more |