



# InDeLib

**RECONNECT AND  
DISCOVER**

# Extended Abstract

International Innovation & Design in Library &  
Information Science Competition (InDeLib2022)

*Organized by*  
Faculty of Information Management  
UiTM Kedah Branch



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**Editors**  
Asmadi Mohammed Ghazali  
Abd Latif Abdul Rahman



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## CONTENTS

|   |    |
|---|----|
| 1. DETECTIVE LOOKING CHART: PLUTCHIK EMOTION GAMES FOR KIDS<br>THROUGH VARK MODEL FOR ASD CHILDREN .....                              | 1  |
| 2. E-VIEW: LOW VISION READER ASSISTANT .....  | 4  |
| 3. WHERE IS YUYU?: DETECTIVE THEME AUGMENTED REALITY (AR)<br>CHILDREN'S BOOK .....  | 7  |
| 4. DEVELOPMENT OF BIODEGRADABLE PLASTIC USING <i>CAULERPA<br/>LENTILLIFERA</i> 'S EXTRACT FOR A SUSTAINABLE ENVIRONMENT .....         | 9  |
| 5. DEVELOPMENT OF BIODEGRADABLE PLASTIC USING <i>METAPENAEUS<br/>INTERMEDIUS</i> 'S SHELL EXTRACT TOWARDS A SUSTAINABLE FUTURE .....  | 11 |
| 6. LITTLE MATES BUSY BOOK .....   | 13 |
| 7. PHYTOPLANKTON MAP .....  | 15 |
| 8. SAMUDERAMAPS: WATER QUALITY MANAGEMENT LIBRARY FOR<br>CONSERVATION AND SUSTAINABLE USE OF MARINE RESOURCES AND<br>ECOSYSTEMS ..... | 17 |
| 9. VIRTUAL REFERENCE CONSULTATION SERVICES .....  | 19 |
| 10. ZOOPLANKTON MAP .....   | 21 |
| 11. CASUAL BOOK WRAPPER .....   | 23 |
| 12. FRAMEWORK: VISUAL-SPATIAL: A MEDIATOR EFFECTS ON THE AUTISM<br>SPECTRUM DISORDERS (ASD) ACHIEVEMENT IN SPEECH UTTERANCE .....     | 26 |
| 13. Sec-CompFY: SECURE COMPARTMENT FOR YOU .....  | 28 |
| 14. SMART LeoBOT .....  | 31 |
| 15. SMART SEIRS .....   | 33 |
| 16. IMPROVISE THE INTERLIBRARY LOAN SYSTEM: DEVELOPMENT OF<br>INTERLIBRARY LOAN ONLINE SYSTEM (iNTeLS) .....                          | 35 |
| 17. REDISCOVERING WISDOM THROUGH ANIMATED DA'WAH SERIES FOR<br>CHILDREN .....   | 37 |
| 18. BATEEQ PACKERS .....  | 40 |
| 19. BAMBOO RAINDROP DRAINAGE SYSTEM .....   | 42 |
| 20. MY BOOK .....   | 44 |
| 21. IDOL: INTERACTIVE DIGITAL OUTDOOR LIBRARY .....   | 46 |
| 22. THE SNOWMAN .....   | 49 |
| 23. UUM IN4SHARE AS INFORMATION SHARING PLATFORM .....  | 52 |
| 24. INFOADVISER .....   | 54 |

## ZOOPLANKTON MAP

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### **Abstract**

Zooplankton is necessary for many aquatic creatures, such as fish, seahorses, clams, and bacteria, as they play an important role in the aquatic food web. Due to their importance, their distribution in our aquatic environment should be mapped as baseline information. The objective of our innovation is to produce maps of zooplankton. The name of our product is Zooplankton Map. To date, there has been no development of a zooplankton map, especially in the northern region of Malaysia, which gave extra advantages to our product. In terms of community benefits, Zooplankton Map will help many clients such as local, government and non-government bodies. Overall, Zooplankton Map is consistent with the Sustainable Development Goals established by the United Nations SDG 14: "Life below water," SDG 2: "Zero hunger," SDG 3: "Good health and well-being," and SDG 13: "Climate action".

### **Keywords**

Geodatabase, Marine, Map, Sustainable, Zooplankton.

### **Product Description**

A geodatabase of zooplankton species collected from the surface water of freshwater and saltwater ecosystems is used to create the Zooplankton Map. To begin, our innovation project would focus on Pulau Tuba, Kedah. The geodatabase now contains species names, sizes, photos, etc. The map was precisely digitized using remote sensing imagery. The map that is created can be digital or printed.

Zooplankton Map combines attribute data (Zooplankton species), spatial data (the geolocation of sampling areas), and a geodatabase and software (ArcGIS software). Figure 1 shows the integration of the requirement for developing the Zooplankton map.

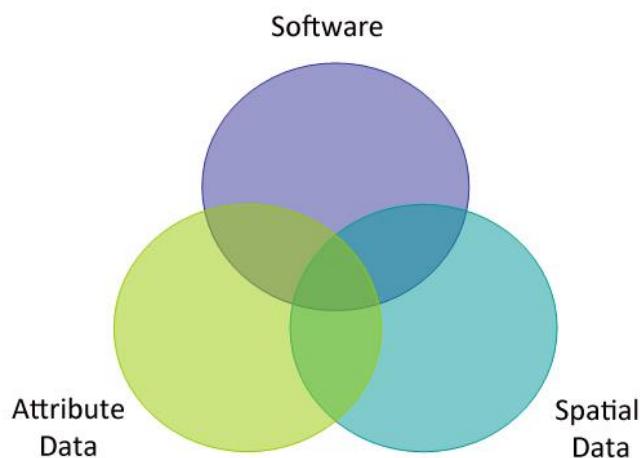


Figure 1: Integration of Information to develop Zooplankton Map

### **Novelty and Uniqueness**

There has yet to be any development of a zooplankton map, particularly in Malaysia's northern region. Most zooplankton species are reported in academic and non-academic journals using graphs and smart art. As a result, public reports on zooplankton did not benefit from the intelligence of geospatial technologies.

### **Benefit to Mankind**

In aquaculture, zooplankton is a good food source for cultured fish, especially fry, fingerlings, and juveniles. For example, marine culture operators and fishermen will benefit from using our product.

The presence and distribution of zooplankton have an impact on pelagic fishery potential. As a result, they are the first prey for most fish larvae and many plankton-eating adult fishes. Our product can be used by environmentalists and government bodies to monitor zooplankton hot spots, especially in Exclusive Economic Zones (EEZ), where most marine species live and are harvested by fishermen.

### **Potential Commercialization**

Potential clients can be expected from locals (fishermen and hotel operators), government bodies (Department of Fisheries, Department of Environment, public universities, research department) and non-government bodies (tourism players, marine culture operators etc.)

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