MICROPLASTIC INGESTION IN THE HUMAN BODY USING DEEP LEARNING

A PROJECT REPORT

Submitted by

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BONAFIDE CERTIFICATE

Certified that this project report **"MICROPLASTIC INGESTION IN THE HUMAN BODY USING DEEP LEARNING"** is the bonafide work of "SRINIVASAN.M(211420205154),THIRUSHANTHKARTHIKEYAN.G(211420205171),JAIVARDHAN.G (211420205049) ,PRAVEEN.D(211420205112)" who carried out the project under my supervision.

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DECLARATION

I here by declare that the project report entitled **"MICROPLASTIC INGESTION IN THE HUMAN BODY USING DEEP LEARNING"** which is being submitted in partial fulfillment of the requirement of the course leading to the award of the 'Bachelor of Technology in Information Technology' in **Panimalar Engineering College, An Autonomous institution Affiliated to Anna University- Chennai** is the result of the project carried out by me under the guidance and supervision of **Mrs.M A.GUNAVATHIE, Assistant Professor in the Department of Information Technology**. I further declared that I or any other person has not previously submitted this project report to any other institution/university for any other degree/ diploma or any other person.

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It is certified that this project has been prepared and submitted under my guidance.

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ABSTRACT

The abstract outlines a significant scientific inquiry into the prevalence of microplastics within the human body and their potential consequences for health. Through the utilization of cutting-edge deep learning methodologies, the study introduces an innovative approach designed to identify and measure microplastic particles within biological specimens. By harnessing the power of artificial intelligence, the research endeavor's to enhance our comprehension of how microplastics interact with the human body and the potential health ramifications therein.

The primary objective of this investigation is to illuminate the extent of microplastic contamination in human tissues and fluids, shedding light on a burgeoning concern in contemporary environmental and public health discourse. Furthermore, the development of an automated detection system represents a pioneering endeavor towards achieving comprehensive analysis of microplastic exposure and distribution within biological systems.

This study holds promise for advancing scientific knowledge regarding the bioaccumulation of microplastics and their potential physiological impacts. Moreover, the proposed deep learning framework offers a scalable solution for efficiently detecting and quantifying microplastic presence in diverse biological samples, paving the way for future research endeavor's and proactive interventions aimed at mitigating the adverse effects of microplastic pollution on human health.

LIST OF CONTENTS

LIST OF FIGURES

LIST OF ABBREVIATIONS

SYMBOL	Expansion
AI	Artificial Intelligence
NN	Neural Network
MATLAB	Matrix Laboratory
CNN	Convolutional Neural Networks
DWT	Discrete Wavelet Transform
LINPACK	Linear Equation Package
ARPACK	ARnoldi PACKage
GUI	Graphical User Interface
CWT	Complex Wavelet Transform
FB	Filter Bank
BC	Breast Cancer