ROBERT GORDON UNIVERSITY ABERDEEN

SCHOOL OF COMPUTING SCIENCE AND DIGITAL MEDIA

MSc Big Data Analytics

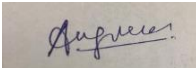| Student Name: **Malmee Amunugama Gedara Ranaweera Mudiyanselage**	Matriculation Number: **1915134**
Supervisor: **Mr. Cassim Farook**	Second Marker:
Project Title: **Forecasting Chronic Pesticide Poisoning using Pesticide Residues in Agriculture**	
	Start Date: **2021-07-01**
	Submission Date: **2022-01-07**

CONSENT

I agree ☑
I do not agree ☐

That the University shall be entitled to use any results, materials or other outcomes arising from my project work for the purposes of non-commercial teaching and research, including collaboration.

DECLARATION
I confirm:

- **That the work contained in this document has been composed solely by myself and that I have not made use of any unauthorised assistance.**

- **That the work has not been accepted in any previous application for a degree.**

- **All sources of information have been specifically acknowledged and all verbatim extracts are distinguished by quotation marks.**

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SYMBOL OF SUCCESS

ABSTRACT

Chronic pesticide poisoning is becoming a common threat to humans as food is one of the main basic human necessities regardless of gender, country, race, or ethnicity. Records of the World Health Organization states that usage of pesticides increasing day by day due to two primary reasons; to increase the productivity of the harvest and minimizing the agricultural losses. A lot of people are unable to see the downside and after-effects of this harmful activity as it boosts the productivity of the harvest. In fact, with the increase in pesticide usage, the pesticide residue is brushed and sedimented in the surface of the agricultural harvest. When people consume those products, they will insert them into their bodies, and when that frequently happens, it results in chronic pesticide poisoning.

This problem is becoming a huge issue day by day, regardless of the country we live in, turning into a global crisis. Necessary safety precautions must be taken to avoid producing unhealthy next generation and making the current generation unwell. A lot of industrial companies are deterred to find alternative eco-friendly pesticides due to the uncertainty of the demand as it could result in losses. This dissertation discusses a system that forecasts pesticide usage in Sri Lanka, so that the public and authorities can keep track of the variation in pesticide usage, banned pesticide usage, environmental pollution caused due to pesticide over usage and keep track of the time to exceed the maximum residue limit of pesticides according to the current usage.

Key Words:

Software Development Life Cycle, Machine Learning, Pesticide residue analysis