

**CERTIFICATE OF AUTHENTIC AUTHORSHIP**

I hereby declare that this submission is my own work and, to the best of my knowledge, it contains no materials previously published or written by another person, nor material which, to a substantial extent, has been accepted for the award of any other degree or diploma at USTP or any other educational institution, except where due acknowledgement is made in the manuscript. Any contribution made to the research by others, with whom I have worked at USTP or elsewhere, is explicitly acknowledged in the manuscript.

I also declare that the intellectual content of this manuscript is the product of my own work, except to the extent that assistance from others in the project design and conception or in style, presentation and linguistic expression is acknowledged.

**XYRUS VINCENT L. DOMINGUEZ**

Research Leader

**PRECIOUS HOPE T. JUMUAD**

Research Member

**VENZ JOSHUA NOLASCO**

Research Member

**REZZELLE T. ONAHON**

Research Member

**MAY 26, 2025**

Date