# "HAND SIGN DETECTION: CAPTURE HAND GESTURES FROM SIGN LANGUAGE AND TRANSLATE TO TEXT USING PYTHON"

**UNDERGRADUATE FINAL PROJECT**

**SUBMITTED AS ONE OF THE REQUIREMENTS TO OBTAIN**

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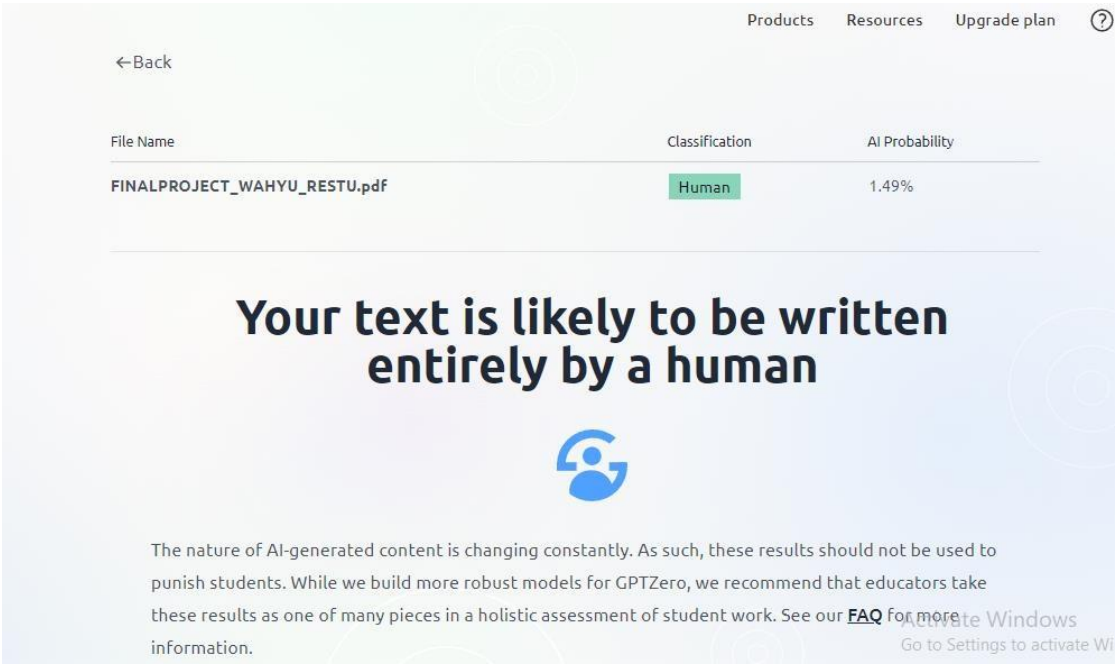


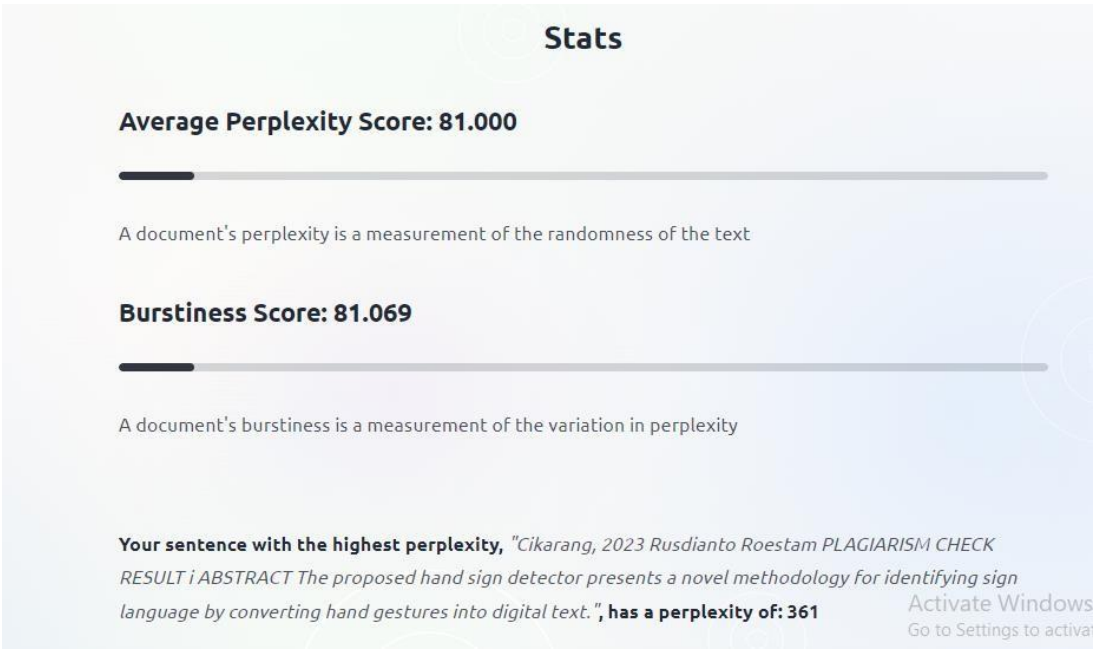

# ABSTRACT

The proposed hand sign detector presents a novel methodology for identifying sign language by converting hand gestures into digital text. The utilization of sign language holds significant importance in facilitating communication for persons who experience hearing impairment. Nevertheless, the identification and comprehension of sign language remains a multifaceted endeavor. The objective of this study is to present a methodology that integrates hand gesture recognition in sign language with automated translation into textual representation.

The proposed approach involves several key steps, including the extraction of visual features from hand gestures by capturing a unique hand gesture, followed by an automatic translator using a trained natural language model for sign language. After that implement an application that is able to recognize and understand the unique variations of hand gestures in sign language.

# DEDICATION

*This final project is dedicated to the author, as well as their parents who have consistently provided support, and the professors and staff who have offered valuable direction and assistance throughout the process. Additionally, I would want to express my gratitude to my fellow colleagues who consistently provide assistance in various situations. For the individuals pursuing a thesis, it is hoped that they will be afforded ease and proficiency.*

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