# **DS5500 Data Science Capstone**

# Automated Grading of Handwritten Assignments in Mathematics

### **Weekly Report for week commencing 25 March 2024**

Project Description:

The primary goal of this project is to leverage the latest advancements in HMER and MLP to develop a comprehensive solution for the automatic grading of handwritten math assignments at the school level. By combining these technologies, this project aims to address the challenges associated with grading handwritten math assignments and enhance the efficiency and effectiveness of math education.

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| Tasks accomplished last week |
| Completed expression tree algorithm |
| Formulated a set of test questions and answers |
| Implemented a basic comparison between student answer and instructor answer |
| Tested single line answers |
| Found a line segmentation algorithm for multi-line answers |

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| Tasks to be accomplished next week |
| Implement line segmentation algorithm |
| Expand grading comparison from single-line to multi-line |
| Develop an interface for easy user testing |

Issues or changes:

Currently retaining simple grading algorithm due to time constraints. Hoping to expand to more complex MLP algorithms in the future.