**Remote Sensing and Satellite Imagery**

**Change Detection**

Project - Final Report

**Team 4**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Sec** | **BN** | **ID** | **Email** |
| بموا عريان عياد | 1 | 17 | 9202391 | bemoi.tawadros00@eng-st.cu.edu.eg |
| مارك ياسر نبيل | 2 | 14 | 9203106 | mark.ibrahim00@eng-st.cu.edu.eg |
| بيتر عاطف فتحي | 1 | 18 | 9202395 | peter.zaki00@eng-st.cu.edu.eg |
| كريم محمود كمال | 2 | 12 | 9203076 | kairm.mohamed003@eng-st.cu.edu.eg |

**1. Deep Learning Results**

|  |  |  |
| --- | --- | --- |
| **Model** | **Jaccard Score** | |
| **Training** | **Validation** |
| Basic UNet | 81% | 77% |
| Diff UNet | 81% | 79% |
| Siamase Nester UNet | 86% | 81% |

**Hyper Parameters:**

*Learning Rate:* Start with 0.001 and the reduced each 10 steps with gamma = 0.2

*Threshold:* 0.3