|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Model** | **Precision** | **Recall** | **Accuracy** | **F1 score** |
| Vgg16 Relu | 81.7205998421468 | 69.06077348066298 | 80.66298342541437 | 80.75375932720744 |
| Model2 | 97.81485360244029 | 97.79005524861878 | 97.79005524861878 | 97.78457672180044 |
| InceptionV3 | 85.83285924443196 | 84.53038674033149 | 84.3261436892947 | 84.53038674033149 |
| Resnet | 72.55718049694168 | 59.66850828729282 | 59.66850828729282 | 60.53086716310353 |
| Alex Net | 81.7205998421468 | 80.66298342541437 | 80.75375932720744 | 80.66298342541437 |
| Version 1 | 76.80745971806697 | 66.85082872928176 | 66.85082872928176 | 64.16535140914186 |
| Version 2 | 80.17396778654631 | 72.37569060773481 | 72.37569060773481 | 69.00443612190883 |

**Comparative Analysis of Leguminosae 3C Dataset Results:**

**Comparative Analysis of Enhanced and Augmented Dataset Results:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Model** | **Precision** | **Recall** | **Accuracy** | **F1 score** |
| Vgg16 Relu | 77.89205717449316 | 77.30627306273062 | 73.0627306273062 | 77.48994522522566 |
| Model2 | 81.92792223099941 | 78.69003690036901 | 78.69003690036901 | 75.92517415687111 |
| InceptionV3 | 97.74920906303199 | 97.69372693726938 | 97.69526625247434 | 97.69372693726938 |
| Resnet | 82.24398518959871 | 77.85977859778598 | 77.85977859778598 | 76.04332631940991 |
| Alex Net | 87.89228082827987 | 83.30258302583026 | 83.30258302583026 | 83.27325322616357 |
| Version 1 | 96.5664930288707 | 96.30996309963099 | 96.30996309963099 | 96.29789936053001 |
| Version 2 | 94.10484236421311 | 93.72693726937269 | 96.30996309963099 | 96.29789936053001 |

**Comparative Analysis of Enhanced Leguminosae 3C Models**



|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Model** | **Precision (%)** | **Recall (%)** | **F1 Score (%)** | **Accuracy (%)** |
| **VGG16 (ReLU)** | **71.76** | **72.38** | **71.86** | **72.38** |
| **Model2 (Swish)** | **95.43** | **95.03** | **95.04** | **95.03** |
| **Version1 (Swish)** | **82.32** | **77.35** | **75.21** | **77.35** |
| **Inception V3** | **87.07** | **86.74** | **86.79** | **86.74** |
| **Version2 (Swish)** | **86.61** | **86.19** | **86.03** | **86.19** |
| **AlexNet (ReLU)** | **72.32** | **59.67** | **58.22** | **59.67** |
| **ResNet (ReLU)** | **82.24** | **77.86** | **76.04** | **77.86** |

