LMSuccSite: Supplementary Materials

Table S1: Performance Evaluation Metrics

|  |  |
| --- | --- |
| **Metric** | **Equation** |
| Accuracy |  |
| Sensitivity |  |
| Specificity |  |
| MCC |  |
| GMean |  |

Table S2: Hyperparameters of ProtT5-based ANN model

|  |  |
| --- | --- |
| **Parameters** | **Settings** |
| Learning Rate | 0.001 |
| Intermediate Layer Activation Function | ReLU |
| Final Layer Activation Function | Sigmoid |
| Epochs | 60 |
| Batch Size | 256 |
| Dense | 256 |
| Dropout | 0.4 |
| Dense | 128 |
| Dropout | 0.4 |
| Callback | Earlystopping |

Table S3: Hyperparameters of Embedding Based LSTM Model

|  |  |
| --- | --- |
| **Parameters** | **Settings** |
| Embedding Output Dimension | 21 |
| Learning Rate | 0.001 |
| Intermediate Layer Activation Function | ReLU |
| Final Layer Activation Function | Sigmoid |
| Batch Size | 256 |
| Epochs | 100 |
| LSTM | 64 |
| Dropout | 0.2 |
| Flatten | - |
| Dense 1 | 768 |
| Dropout | 0.5 |
| Dense 2 | 256 |
| Dropout | 0.5 |
| Callback | Earlystopping |

Table S4: Hyperparameters of Embedding Based CNN2D Model

|  |  |
| --- | --- |
| **Parameters** | **Settings** |
| Embedding Output Dimension | 21 |
| Learning Rate | 0.001 |
| Intermediate Layer Activation Function | ReLU |
| Final Layer Activation Function | Sigmoid |
| Epochs | 100 |
| Conv2d\_1 number of filters | 32 |
| Conv2d\_1 filter size | 17 × 3 |
| Dropout | 0.2 |
| MaxPooling2d | 2 × 2 |
| Dense 1 | 16 |
| Dropout | 0.2 |
| Callback | Earlystopping |

Table S5: Hyperparameters of ANN-based Combined Model

|  |  |
| --- | --- |
| **Parameters** | **Settings** |
| Learning Rate | 0.001 |
| Intermediate Layer Activation Function | ReLU |
| Final Layer Activation Function | Sigmoid |
| Batch Size | 256 |
| Epochs | 10 |
| Dense | 16 |
| Dense | 4 |
| Callback | Early stopping |