

# Project Trial Log

Experiment Number	Parameters	Results
<b>1</b> <b>#Change the learning rate</b>	input_dim = X.shape[1] hidden_dim = 64 output_dim = 1 learning_rate = 0.1 epochs = 30 batch_size = 128	Test Loss (Binary Cross-Entropy): 0.6942 Failure: <ul style="list-style-type: none"> <li>- Precision: 0.04</li> <li>- Recall: 0.66</li> <li>- f1-score: 0.07</li> </ul> No Failure: <ul style="list-style-type: none"> <li>- precision: 0.98</li> <li>- recall: 0.49</li> <li>- f1-score: 0.65</li> </ul> Accuracy: 0.49
<b>2</b>	input_dim = X.shape[1] hidden_dim = 64 output_dim = 1 learning_rate = 0.2 epochs = 30 batch_size = 128	Test Loss (Binary Cross-Entropy): 0.6895 Failure: <ul style="list-style-type: none"> <li>- Precision: 0.04</li> <li>- Recall: 0.61</li> <li>- f1-score: 0.08</li> </ul> No Failure: <ul style="list-style-type: none"> <li>- precision: 0.98</li> <li>- recall: 0.57</li> <li>- f1-score: 0.72</li> </ul> Accuracy: 0.57
<b>3</b>	input_dim = X.shape[1] hidden_dim = 64 output_dim = 1 learning_rate = 0.3 epochs = 30 batch_size = 128	Test Loss (Binary Cross-Entropy): 0.6881 Failure: <ul style="list-style-type: none"> <li>- Precision: 0.04</li> <li>- Recall: 0.51</li> <li>- f1-score: 0.07</li> </ul> No Failure: <ul style="list-style-type: none"> <li>- precision: 0.97</li> <li>- recall: 0.59</li> <li>- f1-score: 0.74</li> </ul> Accuracy: 0.59
<b>4</b>	input_dim = X.shape[1] hidden_dim = 64 output_dim = 1 learning_rate = 0.4 epochs = 30 batch_size = 128	Test Loss (Binary Cross-Entropy): 0.6896 Failure: <ul style="list-style-type: none"> <li>- Precision: 0.01</li> <li>- Recall: 0.10</li> <li>- f1-score: 0.02</li> </ul> No Failure: <ul style="list-style-type: none"> <li>- precision: 0.96</li> <li>- recall: 0.74</li> <li>- f1-score: 0.83</li> </ul> Accuracy: 0.72

<b>5</b>	input_dim = X.shape[1] hidden_dim = 64 output_dim = 1 learning_rate = 0.5 epochs = 30 batch_size = 128	Test Loss (Binary Cross-Entropy): 0.6923 Failure: <ul style="list-style-type: none"> <li>- Precision: 0.03</li> <li>- Recall: 0.54</li> <li>- f1-score: 0.06</li> </ul> No Failure: <ul style="list-style-type: none"> <li>- precision: 0.97</li> <li>- recall: 0.52</li> <li>- f1-score: 0.68</li> </ul> Accuracy: 0.52
<b>6</b>	input_dim = X.shape[1] hidden_dim = 64 output_dim = 1 learning_rate = 0.41 epochs = 30 batch_size = 128	Test Loss (Binary Cross-Entropy): 0.6924 Failure: <ul style="list-style-type: none"> <li>- Precision: 0.03</li> <li>- Recall: 0.41</li> <li>- f1-score: 0.05</li> </ul> No Failure: <ul style="list-style-type: none"> <li>- precision: 0.97</li> <li>- recall: 0.55</li> <li>- f1-score: 0.70</li> </ul> Accuracy: 0.54
<b>7</b> <b>#Change the batch size</b>	input_dim = X.shape[1] hidden_dim = 64 output_dim = 1 learning_rate = 0.4 epochs = 30 batch_size = 130	Test Loss (Binary Cross-Entropy): 0.6933 Failure: <ul style="list-style-type: none"> <li>- Precision: 0.04</li> <li>- Recall: 0.69</li> <li>- f1-score: 0.08</li> </ul> No Failure: <ul style="list-style-type: none"> <li>- precision: 0.98</li> <li>- recall: 0.51</li> <li>- f1-score: 0.67</li> </ul> Accuracy: 0.52
<b>8</b>	input_dim = X.shape[1] hidden_dim = 64 output_dim = 1 learning_rate = 0.4 epochs = 30 batch_size = 126	Test Loss (Binary Cross-Entropy): 0.6933 Failure: <ul style="list-style-type: none"> <li>- Precision: 0.03</li> <li>- Recall: 0.52</li> <li>- f1-score: 0.06</li> </ul> No Failure: <ul style="list-style-type: none"> <li>- precision: 0.97</li> <li>- recall: 0.46</li> <li>- f1-score: 0.63</li> </ul> Accuracy: 0.46
<b>9</b> <b>#Change Epoch</b>	input_dim = X.shape[1] hidden_dim = 64 output_dim = 1 learning_rate = 0.4	Test Loss (Binary Cross-Entropy): 0.6919 Failure: <ul style="list-style-type: none"> <li>- Precision: 0.02</li> <li>- Recall: 0.20</li> </ul>

	epochs = 35 batch_size = 128	- f1-score: 0.03 No Failure: - precision: 0.96 - recall: 0.64 - f1-score: 0.77 Accuracy: 0.62
<b>10</b>	# Hyperparameters input_dim = X.shape[1] hidden_dim = 64 output_dim = 1 learning_rate = 0.4 epochs = 25 batch_size = 128	Test Loss (Binary Cross-Entropy): 0.6910 Failure: - Precision: 0.05 - Recall: 0.75 - f1-score: 0.09 No Failure: - precision: 0.99 - recall: 0.53 - f1-score: 0.69 Accuracy: 0.54
<b>11</b> <b>#Change</b> <b>Hidden</b> <b>Dimension</b>	input_dim = X.shape[1] hidden_dim = 67 output_dim = 1 learning_rate = 0.4 epochs = 30 batch_size = 128	Test Loss (Binary Cross-Entropy): 0.6903 Failure: - Precision: 0.05 - Recall: 0.64 - f1-score: 0.09 No Failure: - precision: 0.98 - recall: 0.61 - f1-score: 0.75 Accuracy: 0.61
<b>12</b>	input_dim = X.shape[1] hidden_dim = 61 output_dim = 1 learning_rate = 0.4 epochs = 30 batch_size = 128	Test Loss (Binary Cross-Entropy): 0.6893 Failure: - Precision: 0.05 - Recall: 0.57 - f1-score: 0.09 No Failure: - precision: 0.98 - recall: 0.66 - f1-score: 0.79 Accuracy: 0.66