

List of Tables

Fig No.	Fig. Caption	Page No.
Table 1.1	Comparison between CNN and RNN.....	04
Table 2.1	Comparison of various Filtering Techniques.....	15
Table 2.2	Different Methods of Food Classification.....	22
Table 2.3	Summary of Food image databases.....	31
Table 2.4	Deep Learning Frameworks.....	34
Table 2.5	Lenet Architecture.....	39
Table 2.6	Alexnet Architecture.....	40
Table 2.7	GoogleNet Architecture.....	40
Table 2.8	VGGNet Architecture.....	41
Table 2.9	ResNet50 Architecture.....	42
Table 3.1	Number of Images per food class in TGFD.....	49
Table 4.1	Comparison of Linear and Nonlinear filters.....	52
Table 4.2	Comparison of Median filter and ISMF on TGFD.....	61
Table 5.1	Classification of CNN.....	65
Table 5.2	Classification accuracy of models in Simulation.....	65
Table 5.3	Classification accuracy of models after Transfer Learning.....	70
Table 5.4	Comparison of Simulation and Transfer Learning.....	72
Table 5.5	Classification accuracy of models after Fine-tuning.....	77
Table 5.6	Comparison of classification accuracy of simulation, Transfer Learning, Fine-tuning.....	79
Table 6.1	Comparison of Optimizers.....	85
Table 6.2	Classification accuracy of DRCNN using different optimizers.....	86
Table 6.3	Adam optimizer with different learning rates for DRCNN.....	87
Table 6.4	Hyperparameters for DRCNN.....	88
Table 6.5	Accuracy of DRCNN on TGFD.....	95
Table 6.6	Comparison of DRCNN with Fine-tune existing Models.....	96
Table 6.7	Performance of evaluation metrics for prebuilt models and DRCNN.....	98
Table 6.8	Number of images per Food class in Extended TGFD.....	100
Table 6.9	Comparison of Fine-tuned Prebuilt models and DRCNN	

for extended TGFD.....	102
Table 6.10 Result of DRCNN for Different Datasets.....	103
Table 6.11 Comparative Analysis of DRCNN with other models with Food-101 Dataset.....	104
Table 7.1 CNN Architectures with Parameters.....	109
Table 7.2 Time Taken by CNN Architecture on Dataset.....	110