

Table of Contents

Part 1 -Biometric Analysis of Ear

- 1) Introduction
 - 1.1 Objective
 - 1.2 Motivation
 - 1.3 Background and Related Research
 - 1.4 Approach
 - 1.5 Outline of the Algorithm
- 2) Literature Review
 - 2.1 Image Enhancement
 - 2.2 Basics of Feature Extraction Methods
 - 2.3 Scale Invariant Feature Transform
 - 2.4 Speed Up of Robust Features
 - 2.5 Modeling Techniques
 - 2.4.1 Multiclass SVM
 - 2.6 Matching Criteria
- 3) Datasets Used
 - 3.1 IIT Delhi Dataset
 - 3.2 AMI Ear Dataset
 - 3.3 Summary of Dataset
- 4)Experiments
 - 4.1 Analysis
 - 4.2 Results
 - 4.3 Discussion
 - 4.4 Conclusion

Part 2 - Digit Classification using MNIST

- 5) Introduction
 - 5.1 Shallow Methods
 - 5.2 Deep Learning Approach
 - 5.3 Deep Learning Algorithms
 - 5.4 GPUs

6) Literature Review

6.1 Convolution Neural Network

6.2 Layers of CNN

6.3 Finetuning

6.3 Dropout

6.4 ReLU Non Linearity

6.5 Softmax Regression

7) Dataset Used

7.1 MNIST Dataset

8)Experiments

8.1 Analysis

8.2 Results

8.3 Discussion

8.4 Future Work