EDGE-BASED DIRECTIONAL FEATURE EXTRACTION FOR WRITER IDENTIFICATION

Himanshu Kumar Keshri
218CS1084

Guided by : Dr. R.K. Mohapatra

National Institute of Technology, Rourkela

INTRODUCTION

- Authors : Marius Bulacu, Lambert Schomaker, Louis Vuurpijl

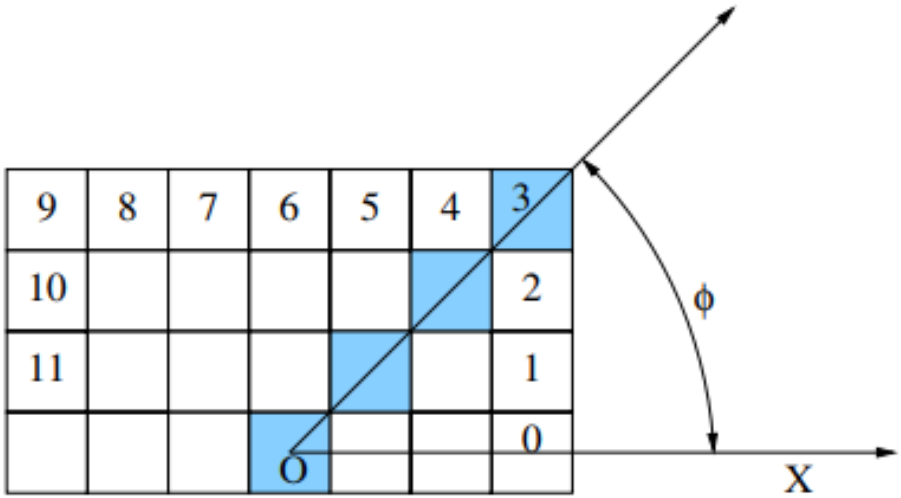

Figure: 1 Extraction of edge-direction distribution

- Each edge pixel in the middle of the square.
- To avoid redudancy, only uppper two quadrants are checked
- If the length of edge is l then number of feature extracted is

$$n = 5 + 4(l - 2)$$

IMPLEMENTATION

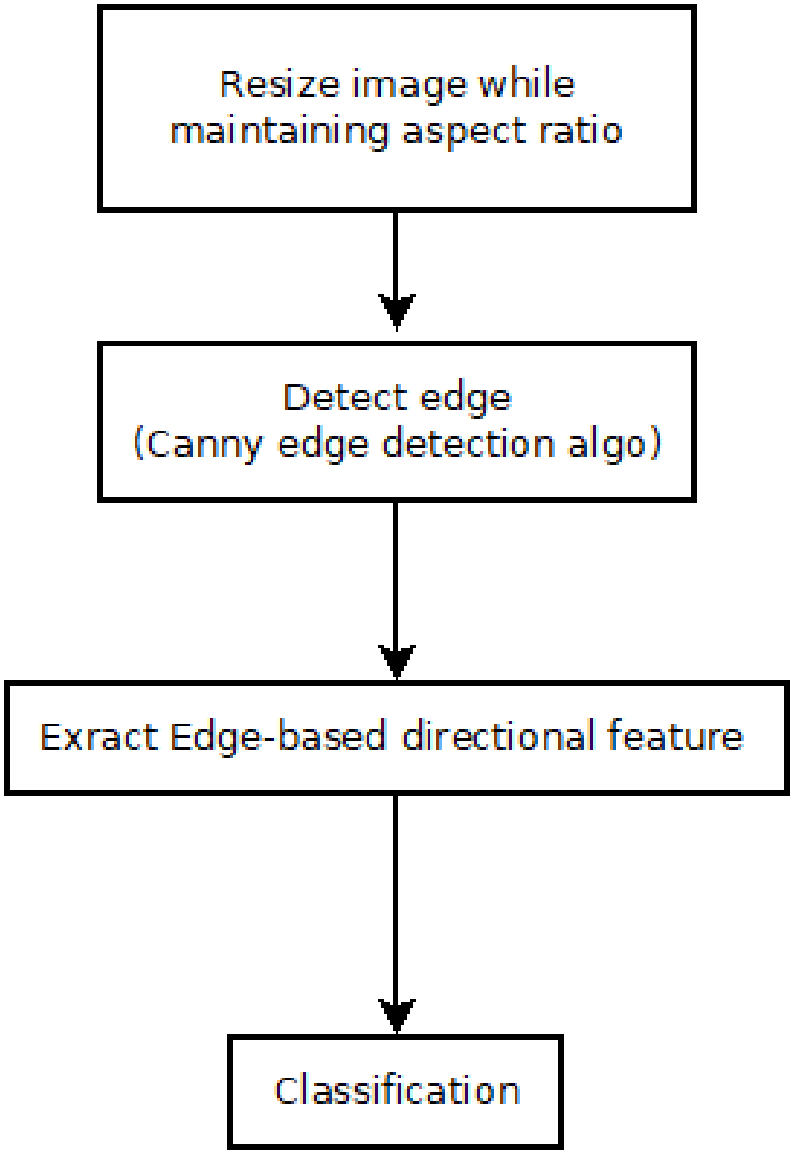

Figure: 2 Flowchart

IMPLEMENTATION

- Dataset - IAMDB
- 5 Writer where each writer have written 10 forms
- features are extracted both sentence level and word level

RESULTS

No.	Edge length	Feature extraction level	Model	Accuracy	Remark
1	4	Sentence	MLP(HL - 100, alpha-0.0005, epoch-50)	28.5%	less no of data generated
2	4	Word	MLP(HL - 100, alpha-0.0005, epoch-50)	75.72%	word level features are better than sentence level
2	5	Word	MLP(HL - 100, alpha-0.0005, epoch-50)	72.67%	increasing edge length is not helpful

Table: Evaluation of different models