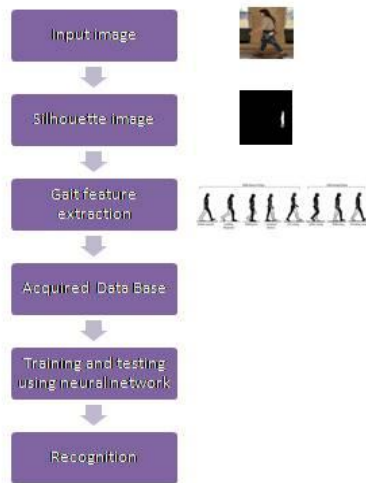


PROPOSED METHODOLOGY



- CCTV image is taken as input image
- The image is then converted into silhouette image
- Gait features using silhouette images are acquired and compared with gait features of military people in the base which is stored as data base.
- If the Gait feature is same it repeats the algorithm
- If it is not same then its results as intruders and check for accuracy using Neural Network

RESULTS AND DISCUSSION

Extracted silhouette images



Gait Feature Extracted

Features	Sample 1	Sample 2	Sample 3	Sample 4
Foot length	39.33	40.44	38.25	37.42
Hand swing	35.78	40.04	41.32	38.74
Knee distance	22.75	23.22	21.15	20.55
Stance width	79.8	78.19	78.13	78.3
Gait cycle	119.72	119.07	116.24	116.31

CONT...

TRAINING VALIDATION AND TESTING

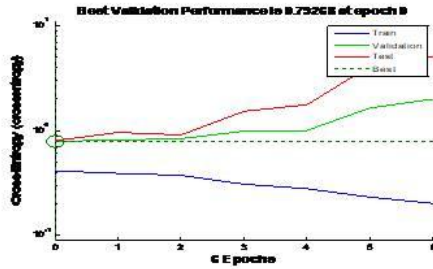
Results	Samples	CE	%E
Trainings:	40	5.37202e-1	15.00000e-0
Validation:	5	9.88230e-1	20.00000e-0
Testing:	5	9.89819e-1	40.00000e-0

Training Confusion Matrix

Output Class	1	2	
1	32 80.0%	5 12.5%	86.5% 13.5%
2	1 2.5%	2 5.0%	66.7% 33.3%
	97.0% 3.0%	25.6% 71.4%	85.0% 15.0%
	1	2	Target Class

Validation Confusion Matrix

Output Class	1	2	
1	4 80.0%	1 20.0%	80.0% 20.0%
2	0 0.0%	0 0.0%	NaN% NaN%
	100% 0.0%	0.0% 100%	80.0% 20.0%
	1	2	Target Class



Test Confusion Matrix

Output Class	1	2	
1	3 60.0%	2 40.0%	60.0% 40.0%
2	0 0.0%	0 0.0%	NaN% NaN%
	100% 0.0%	0.0% 100%	60.0% 40.0%
	1	2	Target Class

All Confusion Matrix

Output Class	1	2	
1	39 78.0%	8 16.0%	83.0% 17.0%
2	1 2.0%	2 4.0%	66.7% 33.3%
	97.5% 2.5%	20.0% 80.0%	82.0% 18.0%
	1	2	Target Class

CONT...

TRAINING AND CONFUSION MATRIX:

Classification Parameter	Test Images
TP	39
FP	8
TN	2
FN	1
SENSITIVITY	97
ACCUARACY	82
PRECISION	83