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# 낙상사고 방지 시스템 i

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SIMPLE STYLE



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모델 아키텍처 소개



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향후 일정

# 1. 데이터 셋

NORMAL



RISK



# 1. 데이터 셋

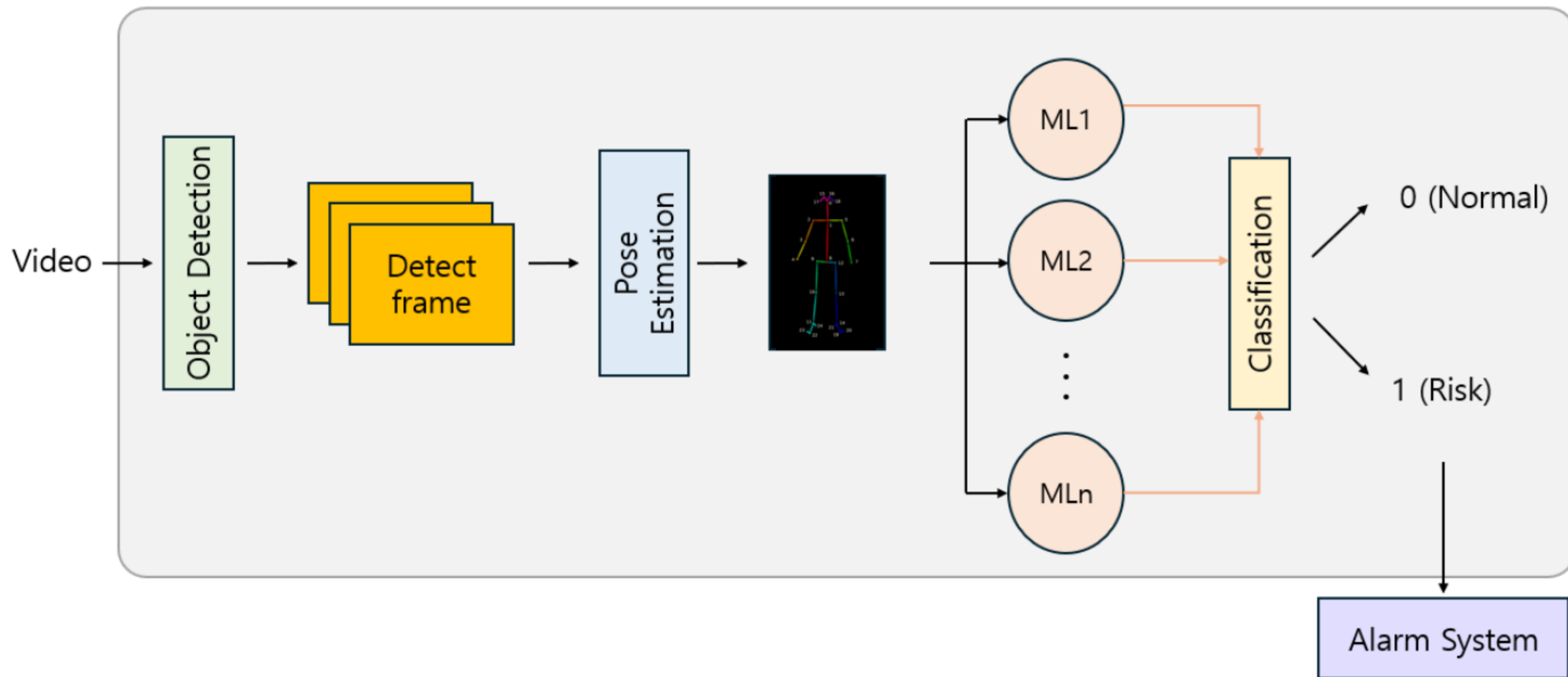
NORMAL



RISK



## 2. 모델 아키텍처 소개





## 2. 모델 아키텍처 소개



DETECTION



POSE  
ESTIMATION



CLASSIFICATION



0

## 2. 모델 아키텍처 소개

DETECTION



POSE  
ESTIMATION



OpenPose

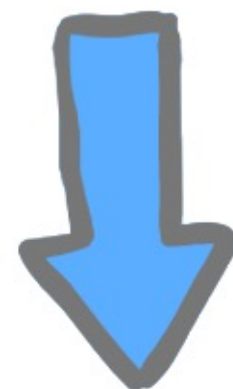
CLASSIFICATION

PYCARET

### 3. 학습 & 테스트

LAnkle	REye	LEye	REar	LEar	label
(25.0, 192.	(-1, -1)	(-1, -1)	(275.0, 46.	(-1, -1)	1
(-1, -1)	(273.0, 88.	(-1, -1)	(261.0, 81.	(-1, -1)	1

Accuracy	
Fold	
0	0.5818
1	0.5556
2	0.6111
Mean	0.5828
Std	0.0227



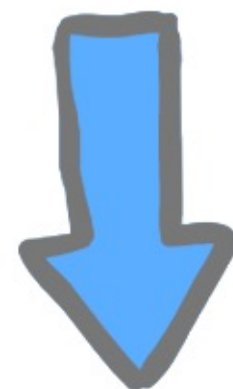
LAnkleX	LAnkleY	REyeX	REyeY	LEyeX	LEyeY	REarX	REarY	LEarX	LEarY	label
25	192	-1	-1	-1	-1	275	46	-1	-1	1
-1	-1	273	88	-1	-1	261	81	-1	-1	1

Accuracy	
Fold	
0	0.7547
1	0.8302
2	0.7692
Mean	0.7847
Std	0.0327



### 3. 학습 & 테스트

LAnkleX	LAnkleY	REyeX	REyeY	LEyeX	LEyeY	REarX	REarY	LEarX	LEarY	label
25	192	-1	-1	-1	-1	275	46	-1	-1	1
-1	-1	273	88	-1	-1	261	81	-1	-1	1



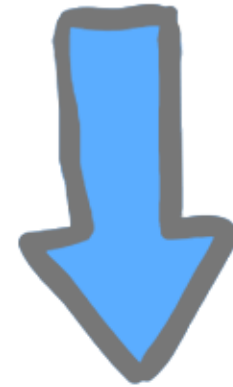
LAnkleX	LAnkleY	REyeX	REyeY	LEyeX	LEyeY	REarX	REarY	LEarX	LEarY	label
0.0488	0.375	-1	-1	-1	-1	0.5371	0.0898	-1	-1	1
0.4277	0.6503	-1	-1	-1	-1	0.3261	0.0371	0.2265	0	1

	Accuracy
Fold	
0	0.7547
1	0.8302
2	0.7692
Mean	0.7847
Std	0.0327

	Accuracy
Fold	
0	0.7963
1	0.8519
2	0.7925
Mean	0.8135
Std	0.0271

### 3. 학습 & 테스트

LAnkleX	LAnkleY	REyeX	REyeY	LEyeX	LEyeY	REarX	REarY	LEarX	LEarY	label
0.0488	0.375	-1	-1	-1	-1	0.5371	0.0898	-1	-1	1
0.4277	0.6503	-1	-1	-1	-1	0.3261	0.0371	0.2265	0	1



앙상블, 하이퍼 파라미터 튜닝

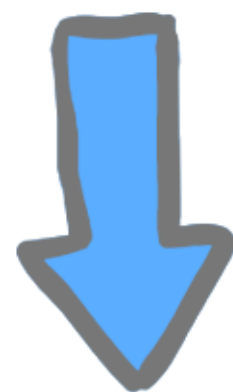
```
Accuracy
Fold
0      0.7963
1      0.8519
2      0.7925
Mean   0.8135
Std    0.0271
```

```
Accuracy
Fold
0      0.8113
1      0.9434
2      0.8269
Mean   0.8605
Std    0.0589
```

### 3. 학습 & 테스트

```
accuracy = accuracy_score(gtlist, pred_list)
```

```
accuracy : 72.90
```



학습 데이터의 POSE ESTIMATION  
이상치 제거

```
accuracy : 79.44
```



## 4. 향후 일정

현재 논문 초안 작성 완료 & 5/3 한국통신학회 논문 제출 예정  
웹 알람 시스템 구현 예정





# THANK YOU

발표를 마치겠습니다 감사합니다