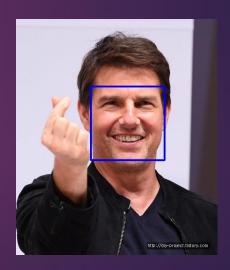
```
:70C>D 5FC:?8 E96 t046?6 Wde E0 bc >J2X 0C !2=6046?6 Wee E0 de >J2X], e., f.,
                      56DECF4E2CC2?86>6?E @ E66E9[ <?@H? 2D 2 E@@E94@>3[ H9:49 762C=J 2==
?8 E96 5:C64E 2? 366?4JE@49C@>6 3 86?6 2?5 E96 AC6D6?46 @7 E96 DEC6AD:
     2?5C2:?7@C6DED @746DE@CD @7 =6>FCD[ E96 252A:7@C>D >2J 92G6 8:G6?
   =2E6C DA=:E 492?86[9 E96 =6>FCD 2?5 =8C:D:78C>D[ 2 DA=:E E92E H8F=5 36 DFAA8CE65 3J >8=64
                                                                                                                   W=@C:D\=:<6X AC:>2E6D] %9:D
        5:6D[,aa.E9@F89E 36EH66? =6>FCD 2?5 =@C:D6D :D E9@F89E E@ 92G6 @44FCC
  @@dd >J2 7@C E9:D?8D]2=E9@F89 @E96C 86?6E:4 E6DED 2?5 E96 7@DD:= C64@C5
  !=6:DE@46?6],a. ~? 5:G6C86?46], . w@H6G6C[ E96 @=56DE =6>FC 7@DD:=D @? |25282D42C 2C6 24EF2==J DF:
C@> 62DE6C? p7C:42 46 A2CE @7 E96 DFA6C4@?E:?6?E v@?5H2?2[ E96 :D=2?5 @7 |25282D42C 92D 366?
      92G6 @C:8:? E96:C WO'e_ >J2X[ p?E2C4E:42 WOg_-'b_ >J2X[ 2?5 x?5:2 WOg_-h_ >J2X],ab.,ac. S:246 2?
92??6=@36EH66? A@DD6D2E65 :? p7C:42 2C@F?5 ea E@ ed >J2[ E96J H@F=5 92G6 925 E@ 92G6 4C@DD65 E96
 8:2?E =6>FC 92?8DE96p7C:42 2?5 |25282D42C H:E9 2 >:?:>F> H:5E9 @7 23@FE de_ <> Wbd_ >: 5:G6CD:EJ $
              E92? E964@?EC@C@> 2 EC66 =:>3 3J 2== 7@FC 766E =:<6 2 D=@H\>@G:?8 D=@E9] $96 E2:=
   J62CD 280 [6>FCDJ2X=68D] p =:76 C6DE0C2E:0? 07 q232<0E:2 C2507:=2:[ 2 D=0E9 =6>EC E92E
 6CD:EJ :? 3@E986?6E:492G6 252AE65 E@ 7:== >2?J @A6? 64@=@8:42= ?:496D D:?46 >2<:28 E96:C H2J E@
     C=5], a. #2?8:?DA643692G:@C 2?5 >@CA9@=@8J W@FEH2C5 2AA62C2?46X C:G2=D E92E @7 E96 >@?<6JD 2?5
 646?E=J 6IE:?4E `e_- 8 :? D:K6 7C@> E96 b_ 8 W`] @KX |252>6 g6CE96VD >@FD6
 6G6=D 07 D04:2==6>FCa_ <8 Wbd_-cc_ =3X pC49260:?5C:D 70?E0J?0?8:[,bb. =6>FCD
 E96> DE2?5 @FE 7C@> 4@>A=61:EJ[ 2?5 F?:BF6 252AE2E:@?D E@ E96 =@42= 4=:>2E6], h.,bc. [6>FCD =24<
  D:K6D[ =@H 6? C6DE2== @E96C AC:>2E6D], bd. s:776C6?E EJA6D @7 =6>FCD
               f.,bc. 5FC:?8 46A92=:K2E:@? WC6=2E:G6 3C2:? D:K6X[ 42E96>6C2=:BJ W24E:G:EJ 3@E9 52J 2?5 ?:8
  =2E:G6=J 4@>>@? >2E6DtiEc6>6 C6D@FC46 =:>:E28:@?D 2?5 D62D@?2= 3C665:?8 2C6 2=D@ E9@F89E E@ 92G6
 8 =@H =6G6=D @72AA62C2?46X EC2:EDi 76>2=6 D@4:2= 5@>:?2?46[ D6IF2= >@?@>@CA9:D>[ 2?5 >2
    CD H6C6 78F25 2== 280?:D>[ DF49 2D DA6C> 40>A6E:E:0?],be. q670C6 E96 2CC:G2= 07 9F>23D
 ?5 E9C@F89 D=2D9\2?5 24C@DD E96 :D=2?5],b'. w@H6G6C[ 62C=J D6EE=6CD BF:4<=J
              <>a Wab [____\3FC? 28C:4F=EFC6 W<?@H? =@42==J 2D E2GJX[ C6DEC:4E:?8 =6>FCD
   EJ 2C6 2=D0 2E 0:46DB >:X],bf. %052J[ E96 5:G6CD:EJ 2:5C2::70C6DED 07 E96 62DE 402DE[ H96C6 AC64:
 ?E:?8 92G6Oe492C24E6CE96:C 9:896DE],a. s6DA:E6 E96:C 252AE2E:@?D
              07 2E =62DE C6DF=E65 :? =6>FC A@AF=2E:@?D 564=:?:?8 D92CA=J[ 2?5 E96:C 5:G6CD
2E6=J DA64:6D 2? `f DA64:6D :? 6:89E 86?6C2[,b`.,bb.,bg. <?@H? 4@==64E:G6=J 2D E96 DF37@DD:= =6
      40?E:?F6],bh. &? 5 DF3DA64:6D 07 =6>FC 2C6 6:E96C E9C62E6?65 0C 6?52?86C65] &?=6DD
    6J H6C6 >@56C? =6>FC E:= C646?E=J[ 8:2?E =6>FCD 6I:DE65 @? |25282D42C] }@H C6AC6D6?E65
       92D H6C6 F2=:<6 7@C>D E92B H6C6 8246 A2CB @7 E96 C:49 =6>FC 5:G6
      D@>6 H6:89:?8 2D E9@D6 D66? :? E96:C =:G:?8 C6=2E:G6D],b`. p== `f 6IE:?4E =6>FCD H6C6
6 ?@H =67E F? DFAA@CE =6>FCD :? 3@E9 D:K6 2?5 2AA62C2?46[ E96J 2=D@ 7:==65 64@=@8:42= ?:496D E92E
                                                  a_ <8 Wcc_ =3X[, a. 275 2C6 E90F89E E0
        >2E6 48>>F?:E:6D @44FA:65],b`. {2C86 A2CED @7 |25282D42C[ H9:49 2C6 ?8H 56G@:5 @7 7@
:62E=J :?4C62D65 @FC DE23:=:EJ 2?5 EFC>@: @? |25282D42C 5FC:28 E96 >:5\'hf_D| 7:6=5 DEF5:8D C6DF>6
     42= ?:496D D:246H6E92E :?4=F565 >8C6 E92? a_ =6>FC DA64:6D 48G6C:?8 E96
                                             DE2?5:?8 @7 E96D6 AC:>2E6D] #6D62C49 724:=:E:6D =:<6 E96 sF 6 [657 r62E6C
     275 EC256DECF4E:@?>@C6 48?EC8==65 D6EE:?8D] [6>FCD 2C6 ;>A@CE2?E 7@C C6D62C49 364FD6 FCD 2C6 FCD 2C6
                                                                                                                    2C6 EC25:E:0?2==J E90F89E E0
             DA64:2=:K65 252A:7@C>D 5FC:?8 E96 t@46?6 Wde E@ bc >J2X @C !2=6@46?6 Mee E@ de >J2X], e., f.,
                               PGF4E2CC2?86>6?E @7 E66E9[ <?@H? 2D 2 E@@E94@>3[
```

## Ai프로그래밍 기말과제

이민우 성도균 김도현

AI를 활용한 아두이노 과제

AI얼굴인식출입문



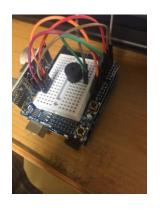
## 프로젝트 목표

- 1. 얼굴인식을 AI로 머신러닝을 통해서 등록된 사람만 출입 할 수 있는 자동출입문 시스템 구축
- 2. 높은 인식률 도전,,

## 프로젝트 사용 부품

- ▶ 스마트폰렌즈
- ▶ 미니브레드보드
- ▶ 아두이노 우노
- ▶ 서브모터
- ▶ 부저
- ► RGB LED
- ▶ F/M 점퍼선
- ▶ F/F 점퍼선









## 프로젝트 사용 부품





허스키렌즈 대신 스마트폰카메라로 AI학습을 시킬 예정입니다.

