

Table 1 MAE

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| --- | --- | --- | --- | --- | --- |
| Test on\Train on | FGNET | Morph1 | Morph2 | Yamaha | WebFace |
| FGNET | 6.199899 | 10.318581 | 11.103532 | 15.298945 | 7.295529 |
| Morph1 | 8.925878 | 5.140412 | 5.561890 | 11.363901 | 8.399755 |
| Morph2 | 14.690505 | 8.698701 | 4.813280 | 7.175134 | 8.036160 |
| Yamaha | 20.119489 | 16.533801 | 10.170187 | 5.861307 | 10.566186 |
| WebFace | 15.678352 | 16.685384 | 15.280862 | 13.608217 | 8.930457 |
| STD | 4.603415 | 5.780398 | 4.835985 | 3.605396 | 1.117426 |
| Average | 14.85356 | 11.76457 | 8.956555 | 9.50214 | 8.98314 |

Table 2 Accuracy within 5 years error

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test on\Train on | FGNET | Morph1 | Morph2 | Yamaha | WebFace |
| FGNET | 0.582800 | 0.276596 | 0.287234 | 0.106383 | 0.476596 |
| Morph1 | 0.383777 | 0.586593 | 0.554479 | 0.203390 | 0.363196 |
| Morph2 | 0.166725 | 0.369864 | 0.601514 | 0.417626 | 0.383106 |
| Yamaha | 0.194886 | 0.175758 | 0.292424 | 0.533765 | 0.347348 |
| WebFace | 0.303143 | 0.165302 | 0.175425 | 0.203419 | 0.428515 |
| STD | 0.100173 | 0.19851 | 0.205212 | 0.164202 | 0.03517 |
| Average | 0.262133 | 0.324379 | 0.405961 | 0.33955 | 0.380541 |

FGNET

Eval fold = 10, train\_ratio = 5.000000e-001:

MAE = 6.199899(0.320072), Acc in 10 years = 0.826000(0.013888), Acc in 5 years = 0.582800(0.044304)

Age 1 to 11: MAE = 3.679692

Age 11 to 21: MAE = 3.265775

Age 21 to 31: MAE = 7.897791

Age 31 to 41: MAE = 16.403513

Age 41 to 51: MAE = 22.116191

Age 51 to 61: MAE = 33.517474

Morph1

Eval fold = 10, train\_ratio = 5.000000e-001:

MAE = 5.140412(0.188274), Acc in 10 years = 0.869670(0.016804), Acc in 5 years = 0.586593(0.018891)

Age 1 to 11: MAE = NaN

Age 11 to 21: MAE = 3.207963

Age 21 to 31: MAE = 3.841509

Age 31 to 41: MAE = 6.916692

Age 41 to 51: MAE = 14.221455

Age 51 to 61: MAE = 20.785489

Morph2

Eval fold = 10, train\_ratio = 5.000000e-001:

MAE = 4.813280(0.022485), Acc in 10 years = 0.899346(0.001186), Acc in 5 years = 0.601514(0.002920)

Age 1 to 11: MAE = NaN

Age 11 to 21: MAE = 4.383909

Age 21 to 31: MAE = 4.451578

Age 31 to 41: MAE = 4.866469

Age 41 to 51: MAE = 5.549082

Age 51 to 61: MAE = 5.749958

Yamaha

Eval fold = 10, train\_ratio = 5.000000e-001:

MAE = 5.861307(0.044554), Acc in 10 years = 0.808234(0.007474), Acc in 5 years = 0.533765(0.003791)

Age 1 to 11: MAE = 5.831484

Age 11 to 21: MAE = 6.745087

Age 21 to 31: MAE = 6.446824

Age 31 to 41: MAE = 6.265989

Age 41 to 51: MAE = 5.987384

Age 51 to 61: MAE = 4.922494

WebFace

Eval fold = 10, train\_ratio = 5.000000e-001:

MAE = 8.930457(0.059984), Acc in 10 years = 0.652883(0.004197), Acc in 5 years = 0.428515(0.004671)

Age 1 to 11: MAE = 6.022608

Age 11 to 21: MAE = 10.718692

Age 21 to 31: MAE = 9.793844

Age 31 to 41: MAE = 10.702816

Age 41 to 51: MAE = 11.002787

Age 51 to 61: MAE = 9.394200

Train on FGNET, Test on Morph1

MAE = 8.925878(0.000000), Acc in 10 years = 0.617433(0.000000), Acc in 5 years = 0.383777(0.000000)

Age 1 to 11: MAE = NaN

Age 11 to 21: MAE = 3.643378

Age 21 to 31: MAE = 7.592022

Age 31 to 41: MAE = 14.298417

Age 41 to 51: MAE = 21.945419

Age 51 to 61: MAE = 30.107538

Train on FGNET, Test on Morph2

MAE = 14.690505(0.000000), Acc in 10 years = 0.358251(0.000000), Acc in 5 years = 0.166725(0.000000)

Age 1 to 11: MAE = NaN

Age 11 to 21: MAE = 4.945514

Age 21 to 31: MAE = 9.194507

Age 31 to 41: MAE = 17.617891

Age 41 to 51: MAE = 24.730998

Age 51 to 61: MAE = 31.281804

Train on FGNET, Test on Yamaha

MAE = 20.119489(0.000000), Acc in 10 years = 0.320644(0.000000), Acc in 5 years = 0.194886(0.000000)

Age 1 to 11: MAE = 3.219559

Age 11 to 21: MAE = 5.688053

Age 21 to 31: MAE = 11.451428

Age 31 to 41: MAE = 18.132492

Age 41 to 51: MAE = 25.131696

Age 51 to 61: MAE = 36.697741

Train on FGNET, Test on WebFace

MAE = 15.678352(0.000000), Acc in 10 years = 0.494067(0.000000), Acc in 5 years = 0.303143(0.000000)

Age 1 to 11: MAE = 5.202023

Age 11 to 21: MAE = 4.377053

Age 21 to 31: MAE = 8.104208

Age 31 to 41: MAE = 17.278480

Age 41 to 51: MAE = 24.664974

Age 51 to 61: MAE = 35.237461

Train on Morph2, Test on Morph1

MAE = 5.561890(0.000000), Acc in 10 years = 0.849879(0.000000), Acc in 5 years = 0.554479(0.000000)

Age 1 to 11: MAE = NaN

Age 11 to 21: MAE = 5.869818

Age 21 to 31: MAE = 5.213446

Age 31 to 41: MAE = 5.345941

Age 41 to 51: MAE = 6.239469

Age 51 to 61: MAE = 10.393169

Train on Yamaha, Test on Morph1

MAE = 11.363901(0.000000), Acc in 10 years = 0.467312(0.000000), Acc in 5 years = 0.203390(0.000000)

Age 1 to 11: MAE = NaN

Age 11 to 21: MAE = 15.110560

Age 21 to 31: MAE = 11.468555

Age 31 to 41: MAE = 7.402660

Age 41 to 51: MAE = 6.049457

Age 51 to 61: MAE = 7.216169

Train on WebFace, Test on Morph1

MAE = 8.399755(0.000000), Acc in 10 years = 0.675545(0.000000), Acc in 5 years = 0.363196(0.000000)

Age 1 to 11: MAE = NaN

Age 11 to 21: MAE = 8.463279

Age 21 to 31: MAE = 8.587004

Age 31 to 41: MAE = 7.762447

Age 41 to 51: MAE = 7.760995

Age 51 to 61: MAE = 12.262751

Train on Morph1, Test on Morph2

MAE = 8.698701(0.000000), Acc in 10 years = 0.619777(0.000000), Acc in 5 years = 0.369864(0.000000)

Age 1 to 11: MAE = NaN

Age 11 to 21: MAE = 2.849106

Age 21 to 31: MAE = 4.491800

Age 31 to 41: MAE = 10.584260

Age 41 to 51: MAE = 15.503612

Age 51 to 61: MAE = 20.244468

Train on Yamaha, Test on Morph2

MAE = 7.175134(0.000000), Acc in 10 years = 0.734415(0.000000), Acc in 5 years = 0.417626(0.000000)

Age 1 to 11: MAE = NaN

Age 11 to 21: MAE = 9.431740

Age 21 to 31: MAE = 7.436176

Age 31 to 41: MAE = 5.636375

Age 41 to 51: MAE = 6.807292

Age 51 to 61: MAE = 7.714397

Train on WebFace, Test on Morph2

MAE = 8.036160(0.000000), Acc in 10 years = 0.681528(0.000000), Acc in 5 years = 0.383106(0.000000)

Age 1 to 11: MAE = NaN

Age 11 to 21: MAE = 7.006068

Age 21 to 31: MAE = 7.499253

Age 31 to 41: MAE = 8.373279

Age 41 to 51: MAE = 9.395671

Age 51 to 61: MAE = 8.221136

Train on Morph1, Test on Yamaha

MAE = 16.533801(0.000000), Acc in 10 years = 0.329924(0.000000), Acc in 5 years = 0.175758(0.000000)

Age 1 to 11: MAE = 12.709303

Age 11 to 21: MAE = 4.008977

Age 21 to 31: MAE = 6.685295

Age 31 to 41: MAE = 13.258716

Age 41 to 51: MAE = 19.551893

Age 51 to 61: MAE = 28.722262

Train on Morph2, Test on Yamaha

MAE = 10.170187(0.000000), Acc in 10 years = 0.551705(0.000000), Acc in 5 years = 0.292424(0.000000)

Age 1 to 11: MAE = 14.932642

Age 11 to 21: MAE = 6.498325

Age 21 to 31: MAE = 5.491288

Age 31 to 41: MAE = 7.666849

Age 41 to 51: MAE = 9.003430

Age 51 to 61: MAE = 13.693088

Train on WebFace, Test on Yamaha

MAE = 10.566186(0.000000), Acc in 10 years = 0.551894(0.000000), Acc in 5 years = 0.347348(0.000000)

Age 1 to 11: MAE = 4.017831

Age 11 to 21: MAE = 9.667414

Age 21 to 31: MAE = 11.762240

Age 31 to 41: MAE = 12.689021

Age 41 to 51: MAE = 12.305980

Age 51 to 61: MAE = 11.474953

Train on Morph1, Test on WebFace

MAE = 16.685384(0.000000), Acc in 10 years = 0.299608(0.000000), Acc in 5 years = 0.165302(0.000000)

Age 1 to 11: MAE = 18.032443

Age 11 to 21: MAE = 6.941079

Age 21 to 31: MAE = 4.516710

Age 31 to 41: MAE = 11.515549

Age 41 to 51: MAE = 18.663577

Age 51 to 61: MAE = 28.170013

Train on Morph2, Test on WebFace

MAE = 15.280862(0.000000), Acc in 10 years = 0.341648(0.000000), Acc in 5 years = 0.175425(0.000000)

Age 1 to 11: MAE = 22.403124

Age 11 to 21: MAE = 11.669388

Age 21 to 31: MAE = 6.659962

Age 31 to 41: MAE = 7.858954

Age 41 to 51: MAE = 11.581649

Age 51 to 61: MAE = 17.080087

Train on Yamaha, Test on WebFace

MAE = 13.608217(0.000000), Acc in 10 years = 0.394682(0.000000), Acc in 5 years = 0.203419(0.000000)

Age 1 to 11: MAE = 18.137665

Age 11 to 21: MAE = 15.701879

Age 21 to 31: MAE = 10.333991

Age 31 to 41: MAE = 7.648785

Age 41 to 51: MAE = 8.948654

Age 51 to 61: MAE = 12.363766

Train on Morph1, Test on FGNET

MAE = 10.318581(0.000000), Acc in 10 years = 0.527660(0.000000), Acc in 5 years = 0.276596(0.000000)

Age 1 to 11: MAE = 13.959873

Age 11 to 21: MAE = 5.015482

Age 21 to 31: MAE = 5.089237

Age 31 to 41: MAE = 10.716509

Age 41 to 51: MAE = 16.783909

Age 51 to 61: MAE = 27.673707

Train on Morph2, Test on FGNET

MAE = 11.103532(0.000000), Acc in 10 years = 0.510638(0.000000), Acc in 5 years = 0.287234(0.000000)

Age 1 to 11: MAE = 15.556521

Age 11 to 21: MAE = 6.662690

Age 21 to 31: MAE = 5.063432

Age 31 to 41: MAE = 7.996711

Age 41 to 51: MAE = 13.290223

Age 51 to 61: MAE = 20.158591

Train on Yamaha, Test on FGNET

MAE = 15.298945(0.000000), Acc in 10 years = 0.246809(0.000000), Acc in 5 years = 0.106383(0.000000)

Age 1 to 11: MAE = 18.278131

Age 11 to 21: MAE = 15.827159

Age 21 to 31: MAE = 9.108346

Age 31 to 41: MAE = 6.350039

Age 41 to 51: MAE = 7.884291

Age 51 to 61: MAE = 17.846844

Train on WebFace, Test on FGNET

MAE = 7.295529(0.000000), Acc in 10 years = 0.757447(0.000000), Acc in 5 years = 0.476596(0.000000)

Age 1 to 11: MAE = 5.834383

Age 11 to 21: MAE = 9.017297

Age 21 to 31: MAE = 7.590281

Age 31 to 41: MAE = 7.218180

Age 41 to 51: MAE = 7.679862

Age 51 to 61: MAE = 13.689271