[1] "Loading the bundled object from Step 3..."

[1] "Data loaded successfully."

[1] "Beginning feature engineering loop..."

[1] "Processing Imputation # 1 ..."

[1] "--- PCA Diagnostics for Group: Math\_Disposition (from Imputation #1) ---"

Loadings:

PC1 PC2 PC3

ANXMAT -0.492 0.656

MATHEFF 0.773 0.457

MATHEF21 0.751 0.513

MATHPERS 0.640 0.356

ST268Q04JA 0.777 -0.240 -0.331

ST268Q07JA 0.502 0.661 -0.264

ST268Q01JA 0.767 -0.434

PC4 PC5 PC6

ANXMAT 0.483 0.292

MATHEFF 0.389

MATHEF21 -0.383

MATHPERS -0.498 0.462

ST268Q04JA 0.243

ST268Q07JA -0.476

ST268Q01JA 0.252

PC7

ANXMAT

MATHEFF

MATHEF21

MATHPERS

ST268Q04JA 0.384

ST268Q07JA

ST268Q01JA -0.368

PC1 PC2

SS loadings 3.256 1.057

Proportion Var 0.465 0.151

Cumulative Var 0.465 0.616

PC3 PC4

SS loadings 0.848 0.656

Proportion Var 0.121 0.094

Cumulative Var 0.737 0.831

PC5 PC6

SS loadings 0.573 0.311

Proportion Var 0.082 0.044

Cumulative Var 0.913 0.957

PC7

SS loadings 0.299

Proportion Var 0.043

Cumulative Var 1.000

PC1

SS loadings 3.2555659

Proportion Var 0.4650808

Cumulative Var 0.4650808

Proportion Explained 0.4650808

Cumulative Proportion 0.4650808

PC2

SS loadings 1.0571102

Proportion Var 0.1510157

Cumulative Var 0.6160966

Proportion Explained 0.1510157

Cumulative Proportion 0.6160966

PC3

SS loadings 0.8483779

Proportion Var 0.1211968

Cumulative Var 0.7372934

Proportion Explained 0.1211968

Cumulative Proportion 0.7372934

PC4

SS loadings 0.65639064

Proportion Var 0.09377009

Cumulative Var 0.83106351

Proportion Explained 0.09377009

Cumulative Proportion 0.83106351

PC5

SS loadings 0.57330623

Proportion Var 0.08190089

Cumulative Var 0.91296440

Proportion Explained 0.08190089

Cumulative Proportion 0.91296440

PC6

SS loadings 0.31057683

Proportion Var 0.04436812

Cumulative Var 0.95733252

Proportion Explained 0.04436812

Cumulative Proportion 0.95733252

PC7

SS loadings 0.29867235

Proportion Var 0.04266748

Cumulative Var 1.00000000

Proportion Explained 0.04266748

Cumulative Proportion 1.00000000

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[1] "--- PCA Diagnostics for Group: Social\_Emotional\_Skills (from Imputation #1) ---"

Loadings:

PC1 PC2 PC3

ASSERAGR 0.462 -0.201 0.828

COOPAGR 0.682 -0.320 -0.328

EMOCOAGR 0.561 0.631 -0.249

EMPATAGR 0.516 -0.604

PERSEVAGR 0.692

STRESAGR 0.523 0.678

PC4 PC5 PC6

ASSERAGR

COOPAGR -0.526

EMOCOAGR 0.460

EMPATAGR 0.315 0.486

PERSEVAGR -0.702

STRESAGR -0.439

PC1 PC2

SS loadings 2.013 1.380

Proportion Var 0.335 0.230

Cumulative Var 0.335 0.565

PC3 PC4

SS loadings 0.914 0.677

Proportion Var 0.152 0.113

Cumulative Var 0.718 0.831

PC5 PC6

SS loadings 0.562 0.453

Proportion Var 0.094 0.076

Cumulative Var 0.924 1.000

PC1

SS loadings 2.0127326

Proportion Var 0.3354554

Cumulative Var 0.3354554

Proportion Explained 0.3354554

Cumulative Proportion 0.3354554

PC2

SS loadings 1.3802659

Proportion Var 0.2300443

Cumulative Var 0.5654998

Proportion Explained 0.2300443

Cumulative Proportion 0.5654998

PC3

SS loadings 0.9140834

Proportion Var 0.1523472

Cumulative Var 0.7178470

Proportion Explained 0.1523472

Cumulative Proportion 0.7178470

PC4

SS loadings 0.6771464

Proportion Var 0.1128577

Cumulative Var 0.8307047

Proportion Explained 0.1128577

Cumulative Proportion 0.8307047

PC5

SS loadings 0.56231984

Proportion Var 0.09371997

Cumulative Var 0.92442468

Proportion Explained 0.09371997

Cumulative Proportion 0.92442468

PC6

SS loadings 0.45345192

Proportion Var 0.07557532

Cumulative Var 1.00000000

Proportion Explained 0.07557532

Cumulative Proportion 1.00000000

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[1] "--- PCA Diagnostics for Group: Openness\_Creativity (from Imputation #1) ---"

Loadings:

PC1 PC2 PC3

CURIOAGR 0.612 0.737

CREATEFF 0.733 -0.546

CREATOP 0.826

IMAGINE 0.716 0.557

OPENART 0.710 -0.473

PC4 PC5

CURIOAGR 0.223

CREATEFF -0.336 0.224

CREATOP -0.545

IMAGINE -0.401

OPENART 0.469 0.221

PC1 PC2

SS loadings 2.611 0.781

Proportion Var 0.522 0.156

Cumulative Var 0.522 0.678

PC3 PC4

SS loadings 0.636 0.550

Proportion Var 0.127 0.110

Cumulative Var 0.806 0.916

PC5

SS loadings 0.422

Proportion Var 0.084

Cumulative Var 1.000

PC1

SS loadings 2.6108689

Proportion Var 0.5221738

Cumulative Var 0.5221738

Proportion Explained 0.5221738

Cumulative Proportion 0.5221738

PC2

SS loadings 0.7810857

Proportion Var 0.1562171

Cumulative Var 0.6783909

Proportion Explained 0.1562171

Cumulative Proportion 0.6783909

PC3

SS loadings 0.6360525

Proportion Var 0.1272105

Cumulative Var 0.8056014

Proportion Explained 0.1272105

Cumulative Proportion 0.8056014

PC4

SS loadings 0.5502968

Proportion Var 0.1100594

Cumulative Var 0.9156608

Proportion Explained 0.1100594

Cumulative Proportion 0.9156608

PC5

SS loadings 0.42169603

Proportion Var 0.08433921

Cumulative Var 1.00000000

Proportion Explained 0.08433921

Cumulative Proportion 1.00000000

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[1] "--- PCA Diagnostics for Group: Self\_Directed\_Learning (from Imputation #1) ---"

Loadings:

PC1 PC2

SDLEFF 0.713 -0.701

GROSAGR 0.713 0.701

PC1 PC2

SS loadings 1.016 0.984

Proportion Var 0.508 0.492

Cumulative Var 0.508 1.000

PC1

SS loadings 1.0162474

Proportion Var 0.5081237

Cumulative Var 0.5081237

Proportion Explained 0.5081237

Cumulative Proportion 0.5081237

PC2

SS loadings 0.9837526

Proportion Var 0.4918763

Cumulative Var 1.0000000

Proportion Explained 0.4918763

Cumulative Proportion 1.0000000

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[1] "--- PCA Diagnostics for Group: Teacher\_Classroom\_Exp (from Imputation #1) ---"

Loadings:

PC1 PC2 PC3

TEACHSUP 0.609 0.277 -0.303

RELATST 0.601 0.505

COGACRCO 0.623 -0.627

COGACMCO 0.723 -0.504

DISCLIM 0.356 0.371 0.850

CREATSCH 0.696 0.217

PC4 PC5 PC6

TEACHSUP 0.665

RELATST -0.239 0.537

COGACRCO 0.407

COGACMCO -0.471

DISCLIM

CREATSCH -0.436 -0.492

PC1 PC2

SS loadings 2.255 1.164

Proportion Var 0.376 0.194

Cumulative Var 0.376 0.570

PC3 PC4

SS loadings 0.896 0.699

Proportion Var 0.149 0.116

Cumulative Var 0.719 0.836

PC5 PC6

SS loadings 0.582 0.404

Proportion Var 0.097 0.067

Cumulative Var 0.933 1.000

PC1

SS loadings 2.2551603

Proportion Var 0.3758601

Cumulative Var 0.3758601

Proportion Explained 0.3758601

Cumulative Proportion 0.3758601

PC2

SS loadings 1.1640652

Proportion Var 0.1940109

Cumulative Var 0.5698709

Proportion Explained 0.1940109

Cumulative Proportion 0.5698709

PC3

SS loadings 0.8958208

Proportion Var 0.1493035

Cumulative Var 0.7191744

Proportion Explained 0.1493035

Cumulative Proportion 0.7191744

PC4

SS loadings 0.6986181

Proportion Var 0.1164364

Cumulative Var 0.8356107

Proportion Explained 0.1164364

Cumulative Proportion 0.8356107

PC5

SS loadings 0.58227382

Proportion Var 0.09704564

Cumulative Var 0.93265637

Proportion Explained 0.09704564

Cumulative Proportion 0.93265637

PC6

SS loadings 0.40406179

Proportion Var 0.06734363

Cumulative Var 1.00000000

Proportion Explained 0.06734363

Cumulative Proportion 1.00000000

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[1] "--- PCA Diagnostics for Group: Home\_Learning\_Env (from Imputation #1) ---"

Loadings:

PC1 PC2 PC3

FAMSUP 0.803 -0.592

CREATFAM 0.699 0.664 0.265

FAMSUPSL 0.733 -0.553 0.396

PC1 PC2

SS loadings 1.670 0.753

Proportion Var 0.557 0.251

Cumulative Var 0.557 0.808

PC3

SS loadings 0.577

Proportion Var 0.192

Cumulative Var 1.000

PC1

SS loadings 1.669674

Proportion Var 0.556558

Cumulative Var 0.556558

Proportion Explained 0.556558

Cumulative Proportion 0.556558

PC2

SS loadings 0.7532694

Proportion Var 0.2510898

Cumulative Var 0.8076478

Proportion Explained 0.2510898

Cumulative Proportion 0.8076478

PC3

SS loadings 0.5770567

Proportion Var 0.1923522

Cumulative Var 1.0000000

Proportion Explained 0.1923522

Cumulative Proportion 1.0000000

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[1] "--- PCA Diagnostics for Group: Remote\_Learning\_Exp (from Imputation #1) ---"

Loadings:

PC1 PC2 PC3

FEELLAH 0.708 -0.536 0.461

PROBSELF 0.551 0.793 0.260

LEARRES 0.815 -0.575

PC1 PC2

SS loadings 1.468 0.921

Proportion Var 0.489 0.307

Cumulative Var 0.489 0.796

PC3

SS loadings 0.611

Proportion Var 0.204

Cumulative Var 1.000

PC1

SS loadings 1.4679684

Proportion Var 0.4893228

Cumulative Var 0.4893228

Proportion Explained 0.4893228

Cumulative Proportion 0.4893228

PC2

SS loadings 0.9214358

Proportion Var 0.3071453

Cumulative Var 0.7964681

Proportion Explained 0.3071453

Cumulative Proportion 0.7964681

PC3

SS loadings 0.6105957

Proportion Var 0.2035319

Cumulative Var 1.0000000

Proportion Explained 0.2035319

Cumulative Proportion 1.0000000

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[1] "--- PCA Diagnostics for Group: School\_Experience (from Imputation #1) ---"

Loadings:

PC1 PC2 PC3

BULLIED -0.711 0.404

FEELSAFE 0.622 0.451 -0.303

SCHRISK -0.586 0.598 -0.238

BELONG 0.686 0.360 -0.243

SCHSUST 0.266 0.413 0.867

PC4 PC5

BULLIED 0.286 0.499

FEELSAFE 0.535

SCHRISK -0.310 -0.382

BELONG -0.442 0.380

SCHSUST

PC1 PC2

SS loadings 1.778 1.025

Proportion Var 0.356 0.205

Cumulative Var 0.356 0.561

PC3 PC4

SS loadings 0.960 0.660

Proportion Var 0.192 0.132

Cumulative Var 0.753 0.885

PC5

SS loadings 0.576

Proportion Var 0.115

Cumulative Var 1.000

PC1

SS loadings 1.7779803

Proportion Var 0.3555961

Cumulative Var 0.3555961

Proportion Explained 0.3555961

Cumulative Proportion 0.3555961

PC2

SS loadings 1.0253709

Proportion Var 0.2050742

Cumulative Var 0.5606702

Proportion Explained 0.2050742

Cumulative Proportion 0.5606702

PC3

SS loadings 0.9604374

Proportion Var 0.1920875

Cumulative Var 0.7527577

Proportion Explained 0.1920875

Cumulative Proportion 0.7527577

PC4

SS loadings 0.6602040

Proportion Var 0.1320408

Cumulative Var 0.8847985

Proportion Explained 0.1320408

Cumulative Proportion 0.8847985

PC5

SS loadings 0.5760074

Proportion Var 0.1152015

Cumulative Var 1.0000000

Proportion Explained 0.1152015

Cumulative Proportion 1.0000000

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[1] "Processing Imputation # 2 ..."

[1] "Processing Imputation # 3 ..."

[1] "Processing Imputation # 4 ..."

[1] "Processing Imputation # 5 ..."

[1] "Feature engineering loop complete."

[1] "Saving the list of engineered datasets..."

[1] "Success! Final list of datasets saved to: D:/essay/resilient\_student/dataset/clean\_R/Step4\_ListOfEngineeredDatasets.rds"