

| Accuracy | F1 | Model | Subject | Fold |
|----------|------|-------------------|---------|------|
| 0,82 | 0,81 | Default algorithm | 50 | 0 |
| 0,86 | 0,86 | Pre-trained CAE | 50 | 0 |
| 0,85 | 0,85 | Default algorithm | 50 | 1 |
| 0,89 | 0,89 | Pre-trained CAE | 50 | 1 |
| 0,83 | 0,82 | Default algorithm | 50 | 2 |
| 0,86 | 0,86 | Pre-trained CAE | 50 | 2 |
| 0,84 | 0,84 | Default algorithm | 50 | 3 |
| 0,87 | 0,87 | Pre-trained CAE | 50 | 3 |
| 0,84 | 0,84 | Default algorithm | 50 | 4 |
| 0,87 | 0,87 | Pre-trained CAE | 50 | 4 |
| 0,86 | 0,86 | Default algorithm | 100 | 0 |
| 0,90 | 0,90 | Pre-trained CAE | 100 | 0 |
| 0,89 | 0,89 | Default algorithm | 100 | 1 |
| 0,91 | 0,91 | Pre-trained CAE | 100 | 1 |
| 0,86 | 0,86 | Default algorithm | 100 | 2 |
| 0,89 | 0,89 | Pre-trained CAE | 100 | 2 |
| 0,88 | 0,88 | Default algorithm | 100 | 3 |
| 0,90 | 0,90 | Pre-trained CAE | 100 | 3 |
| 0,84 | 0,84 | Default algorithm | 100 | 4 |
| 0,90 | 0,90 | Pre-trained CAE | 100 | 4 |
| 0,87 | 0,87 | Default algorithm | 200 | 0 |
| 0,91 | 0,91 | Pre-trained CAE | 200 | 0 |
| 0,91 | 0,91 | Default algorithm | 200 | 1 |
| 0,93 | 0,93 | Pre-trained CAE | 200 | 1 |
| 0,86 | 0,86 | Default algorithm | 200 | 2 |
| 0,84 | 0,85 | Pre-trained CAE | 200 | 2 |
| 0,90 | 0,90 | Default algorithm | 200 | 3 |
| 0,92 | 0,92 | Pre-trained CAE | 200 | 3 |
| 0,89 | 0,89 | Default algorithm | 200 | 4 |
| 0,90 | 0,90 | Pre-trained CAE | 200 | 4 |
| 0,90 | 0,90 | Default algorithm | global | 0 |
| 0,92 | 0,92 | Pre-trained CAE | global | 0 |
| 0,92 | 0,92 | Default algorithm | global | 1 |
| 0,94 | 0,94 | Pre-trained CAE | global | 1 |
| 0,91 | 0,91 | Default algorithm | global | 2 |
| 0,91 | 0,91 | Pre-trained CAE | global | 2 |
| 0,92 | 0,92 | Default algorithm | global | 3 |
| 0,94 | 0,94 | Pre-trained CAE | global | 3 |
| 0,90 | 0,90 | Default algorithm | global | 4 |
| 0,92 | 0,92 | Pre-trained CAE | global | 4 |

Supplementary Table S3 - Classification performance (Accuracy and F1-score) of models trained on HCP test dataset with different subsamples in a 5-fold cross-validation scheme for contrast classification.