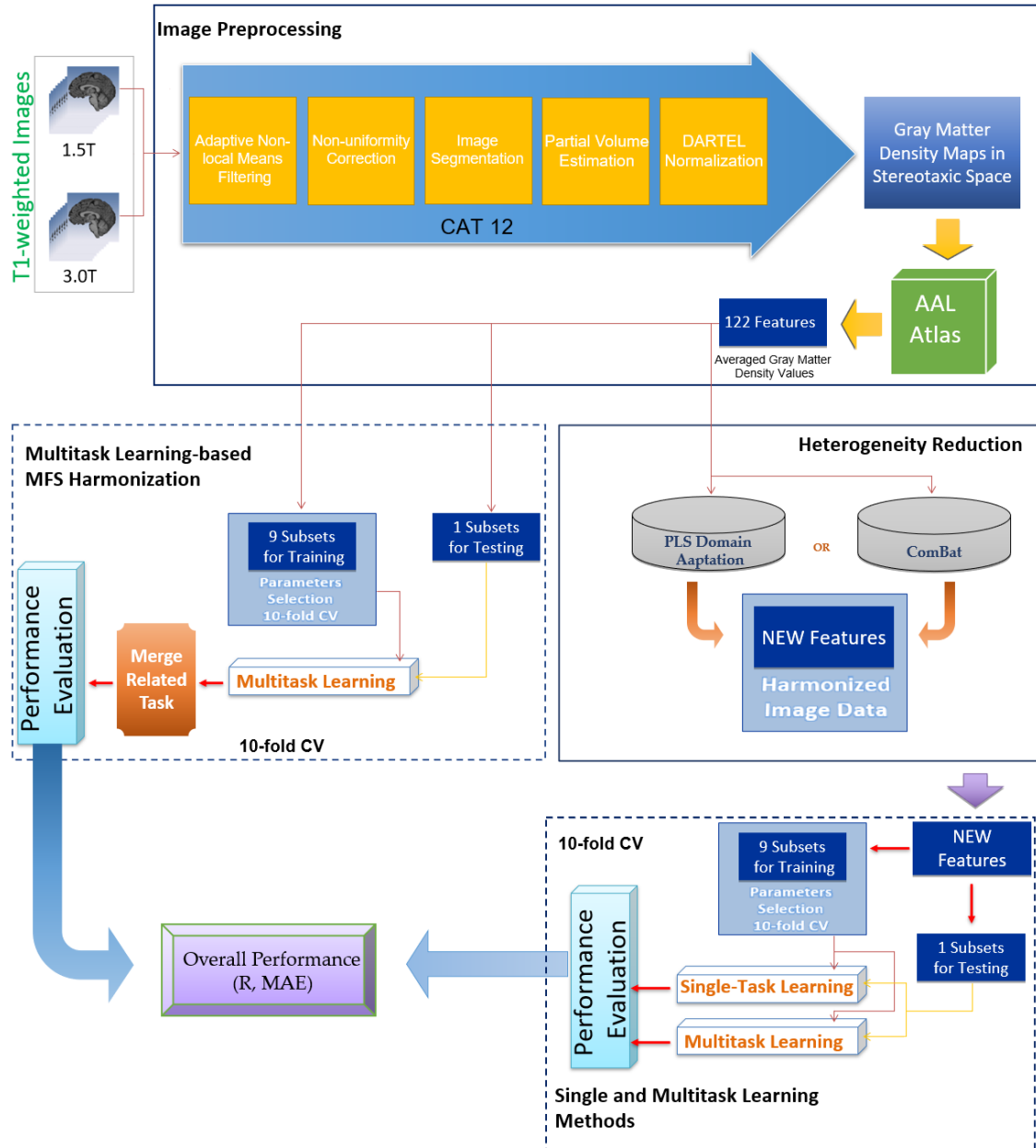**Comparison of single and multitask learning for predicting cognitive decline based on MRI data**

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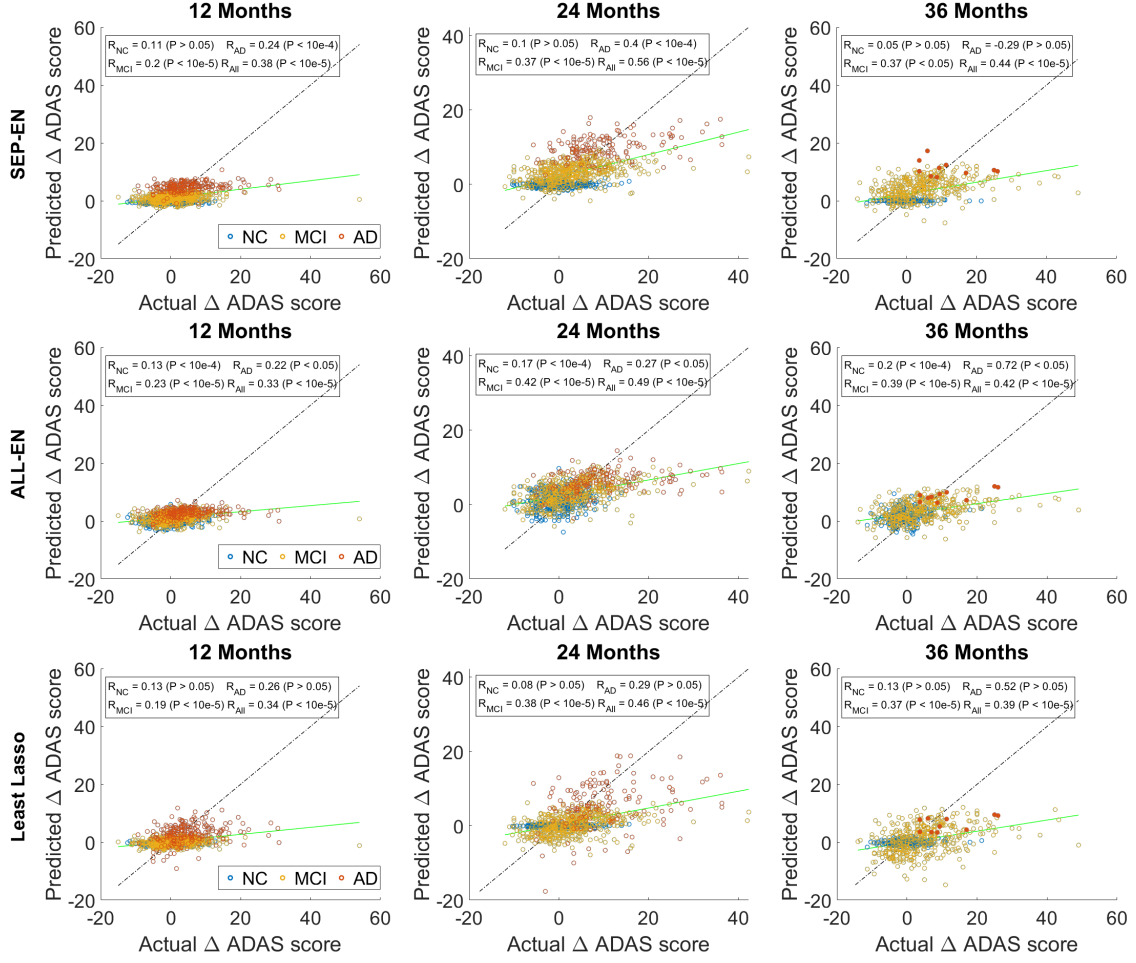
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[2]Department of Computing Sciences, Tampere University, Finland. (e-mail: author@tuni.fi)
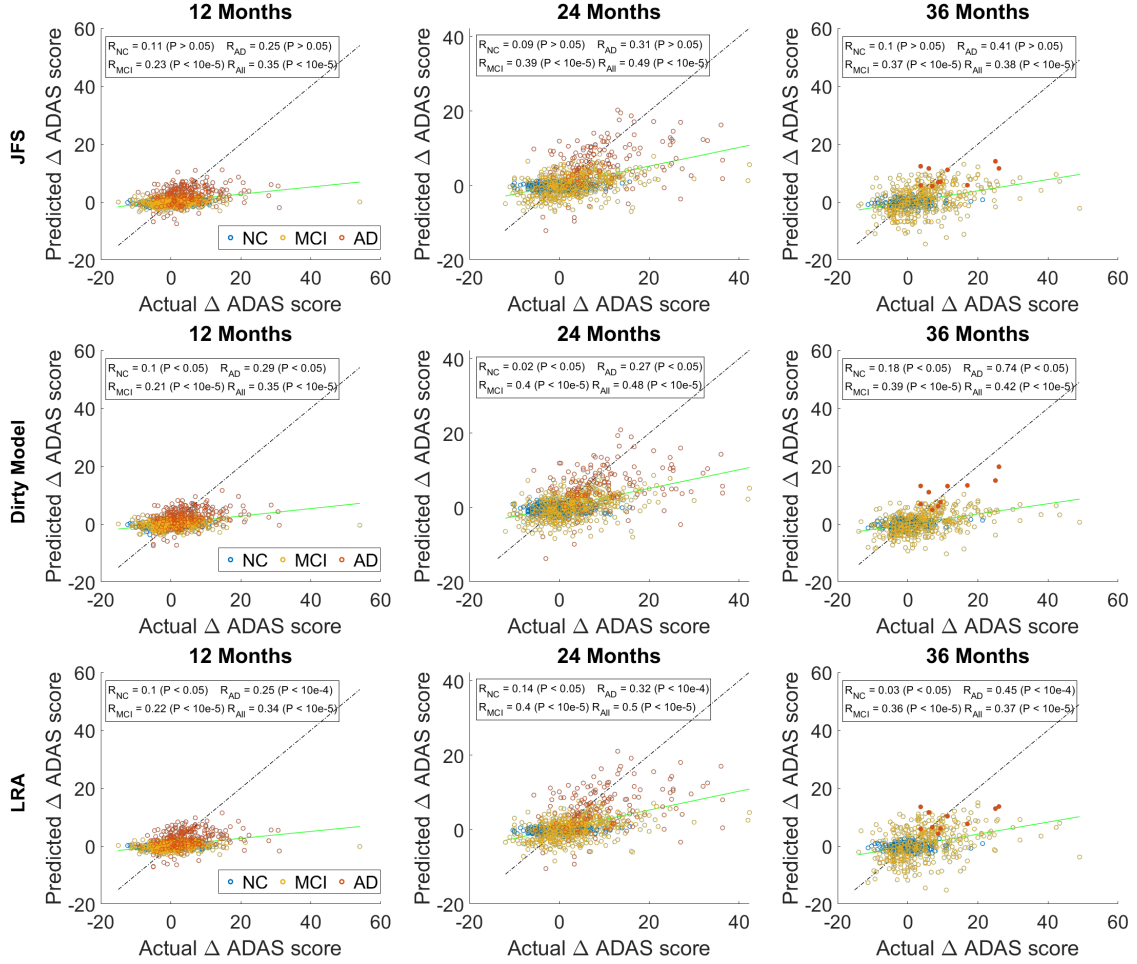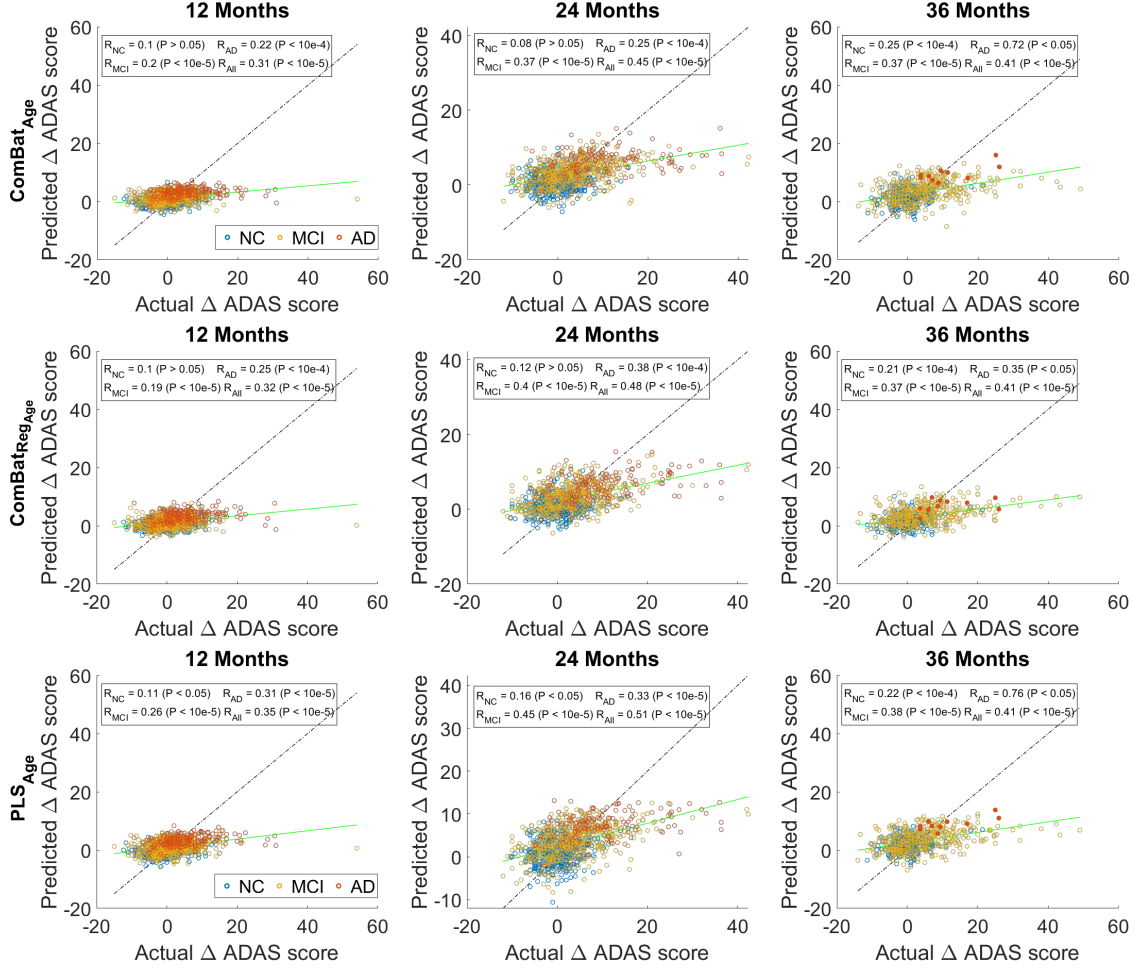
Supplementary Materials

Supplementary Figure 1: Workflow of the proposed methods for predicting the change of ADAS-Cog scores.

Supplementary Figure 2: Scatter plots of the actual change of ADAS-Cog versus the predicted change of ADAS-Cog scores in three groups of diagnoses (NC, MCI, and AD) for SEP-EN (Top row), ALL-EN (Second row), and Least Lasso (Bottom row). The scatter plots are from a cross-validation run with the median correlation within 10 runs. The black dashed-dotted line in each plot indicates the perfect correlation (reference line), and the green solid line delineates the regression line. In panels associated with 36 months, data corresponding to AD subjects are shown in red.

Supplementary Figure 3: Scatter plots for the actual change in ADAS-Cog versus the predicted change of ADAS-Cog scores in the three groups of diagnoses (NC, MCI and AD) for Joint Feature Selection(Top row), Dirty model (Second row), and Low Rank Assumption (Bottom row) approaches. The scatter plots are from the cross-validation run with the median correlation within 10 runs. The black dashed-dotted line in each plot indicates the perfect correlation (reference line), and the green solid line delineates the regression line.

Supplementary Figure 4: Scatter plots for the actual change of ADAS-Cog versus the predicted change of ADAS-Cog scores for $ComBat_{Age}$ (Top row), $ComBat_{Reg_{Age}}$ (Second row) and PLS_{Age} (Bottom row). The scatter plots are from the CV run with the median correlation within 10 CV runs. The black dashed-dotted line in each plot indicates the perfect correlation (reference line), and the green solid line delineates the regression line.