Models Can Lie

An Illustration from Heart Rate Variablity Data

Raju Rimal and Veronika Lindberg

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Presentation

Norwegian University of Life Sciences

NTNU

Overview

1. Background

2. Classification with series stack

3. Classification with series averaged over Series-Event Combination

4. Classification with series averaged over Person-Event Combination

5. Some Comparison

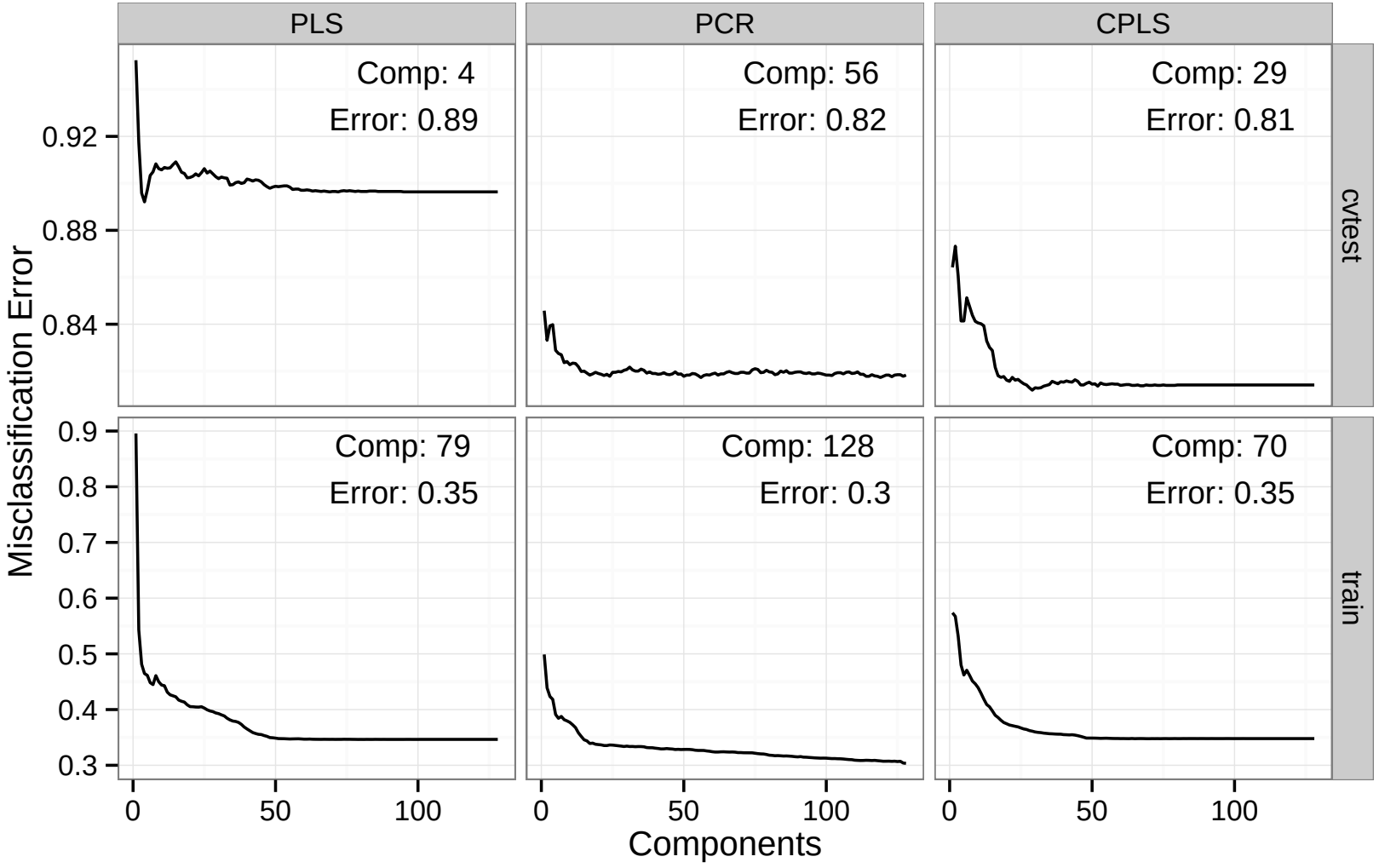
Background

Theoritical Background

Some theoritical things and something about cross-validation

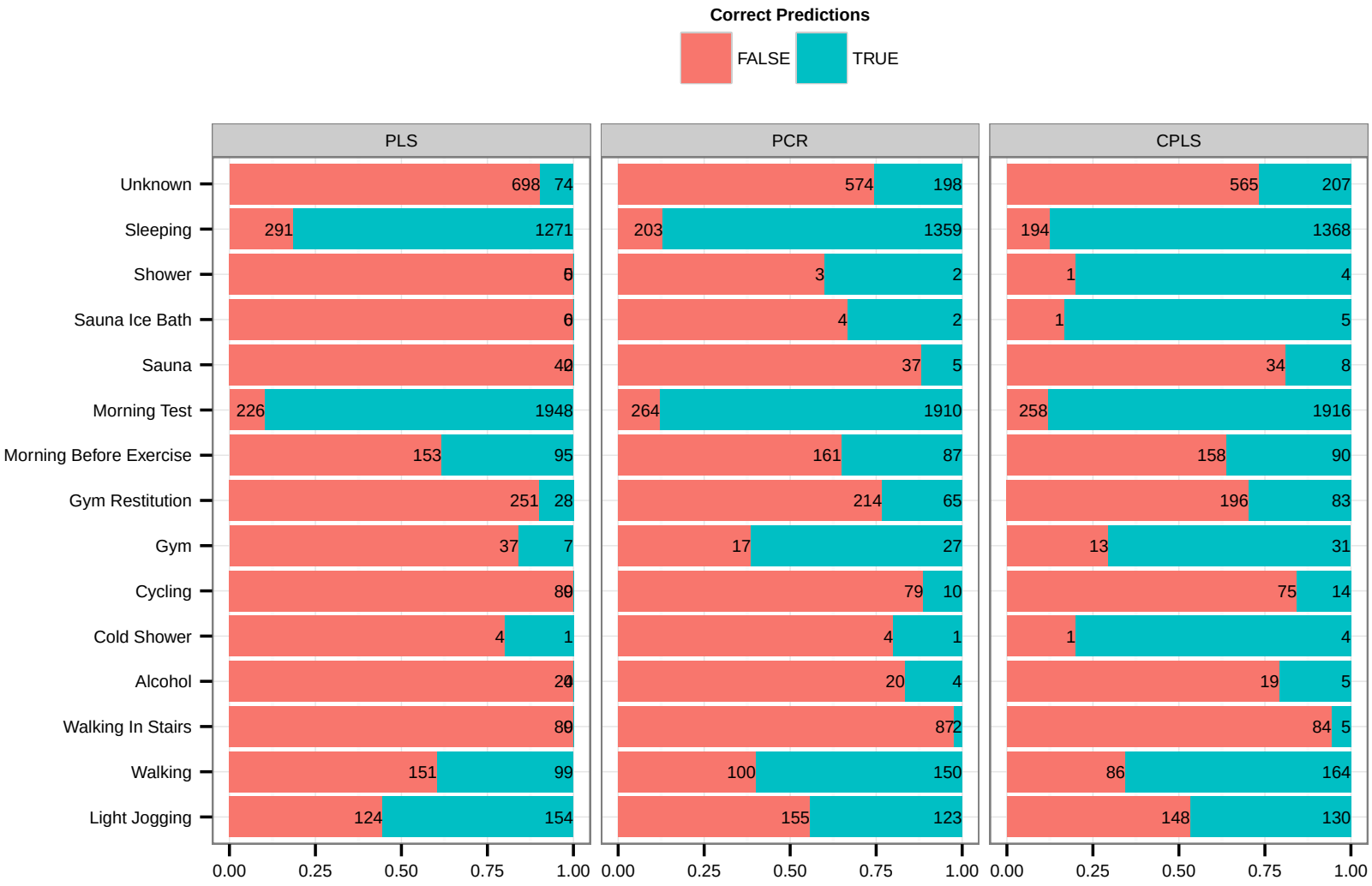
Classification with series stack

Training and Cross-validation Errors



Misclassifications

Training Misclassifications



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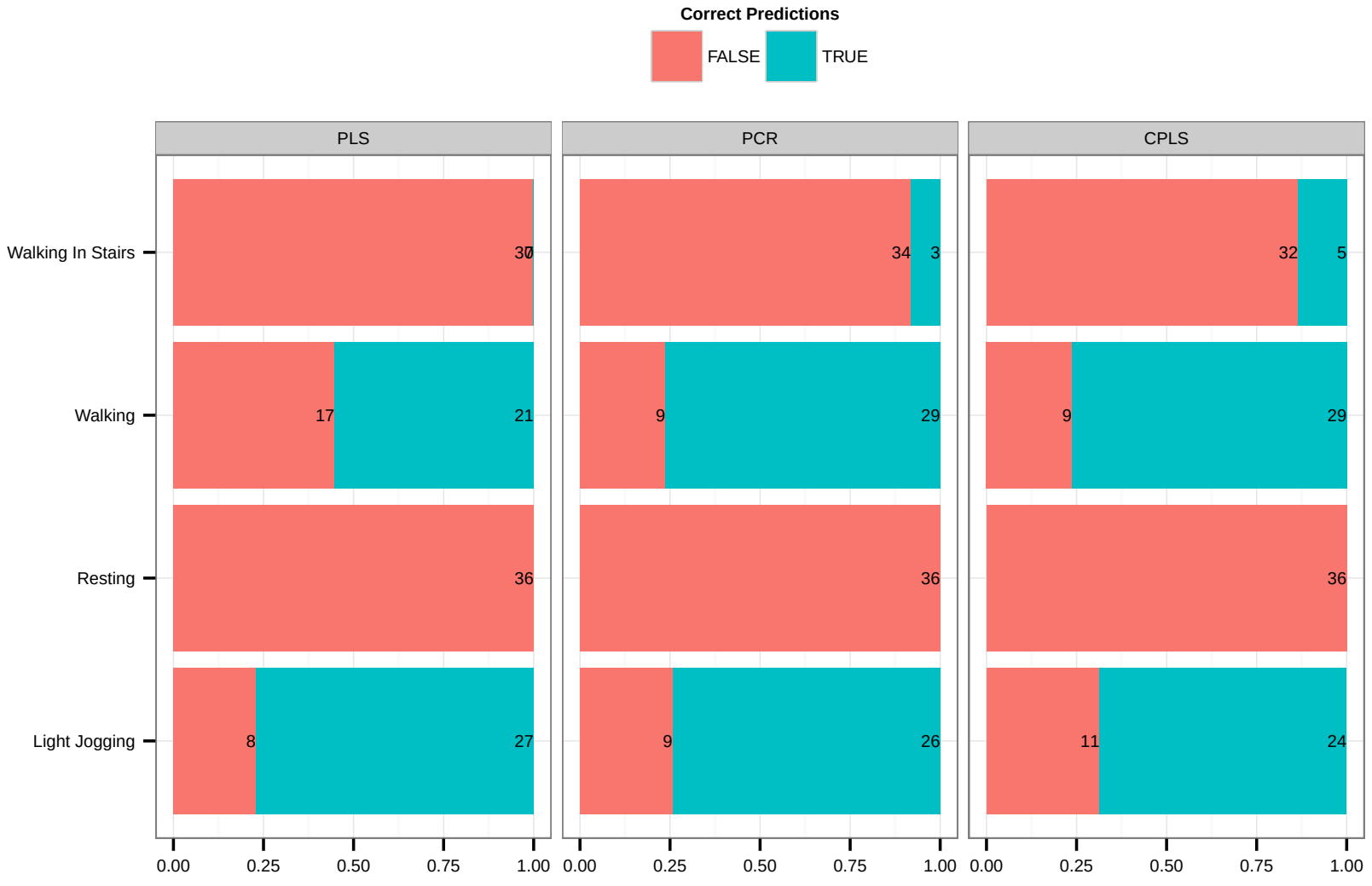
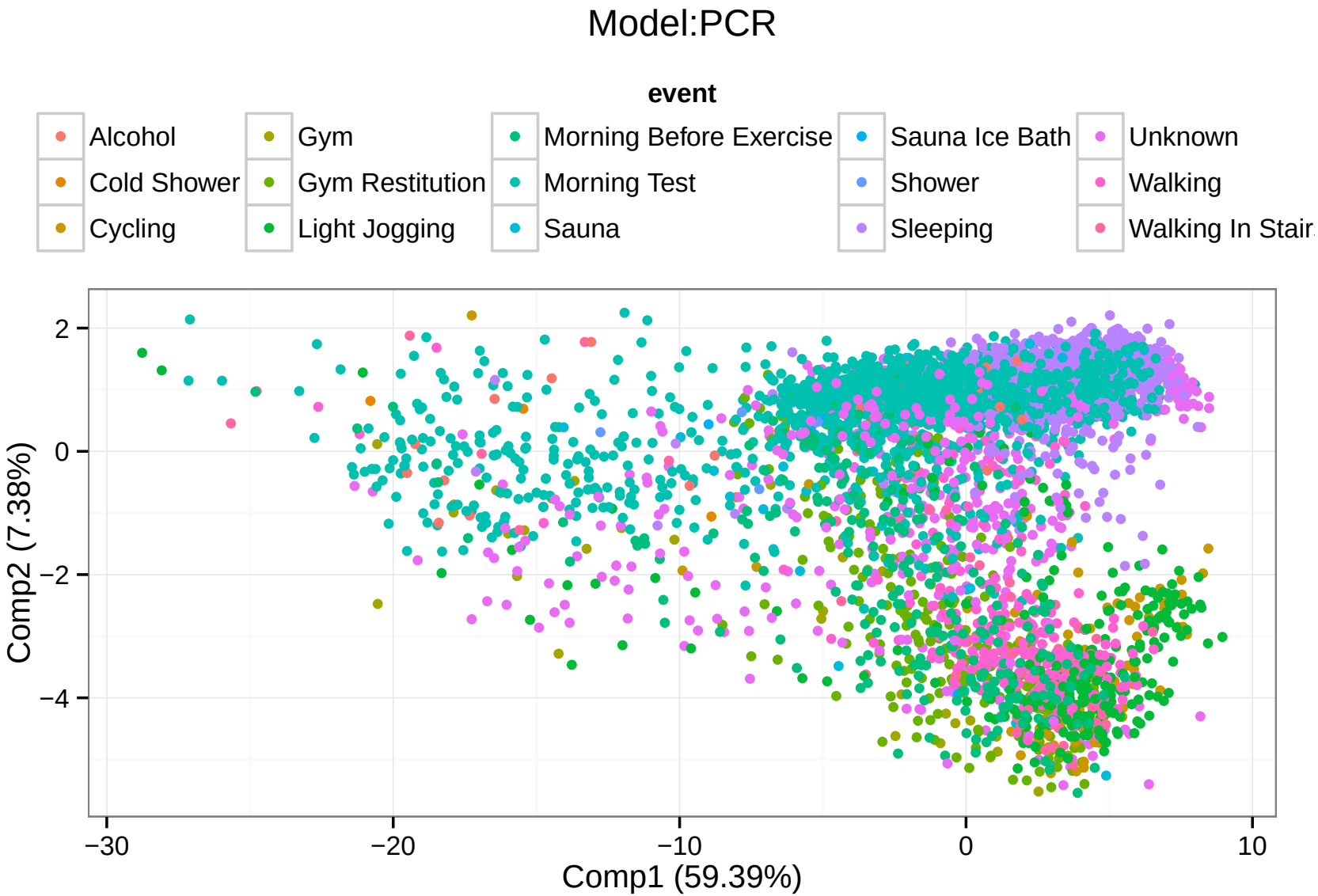
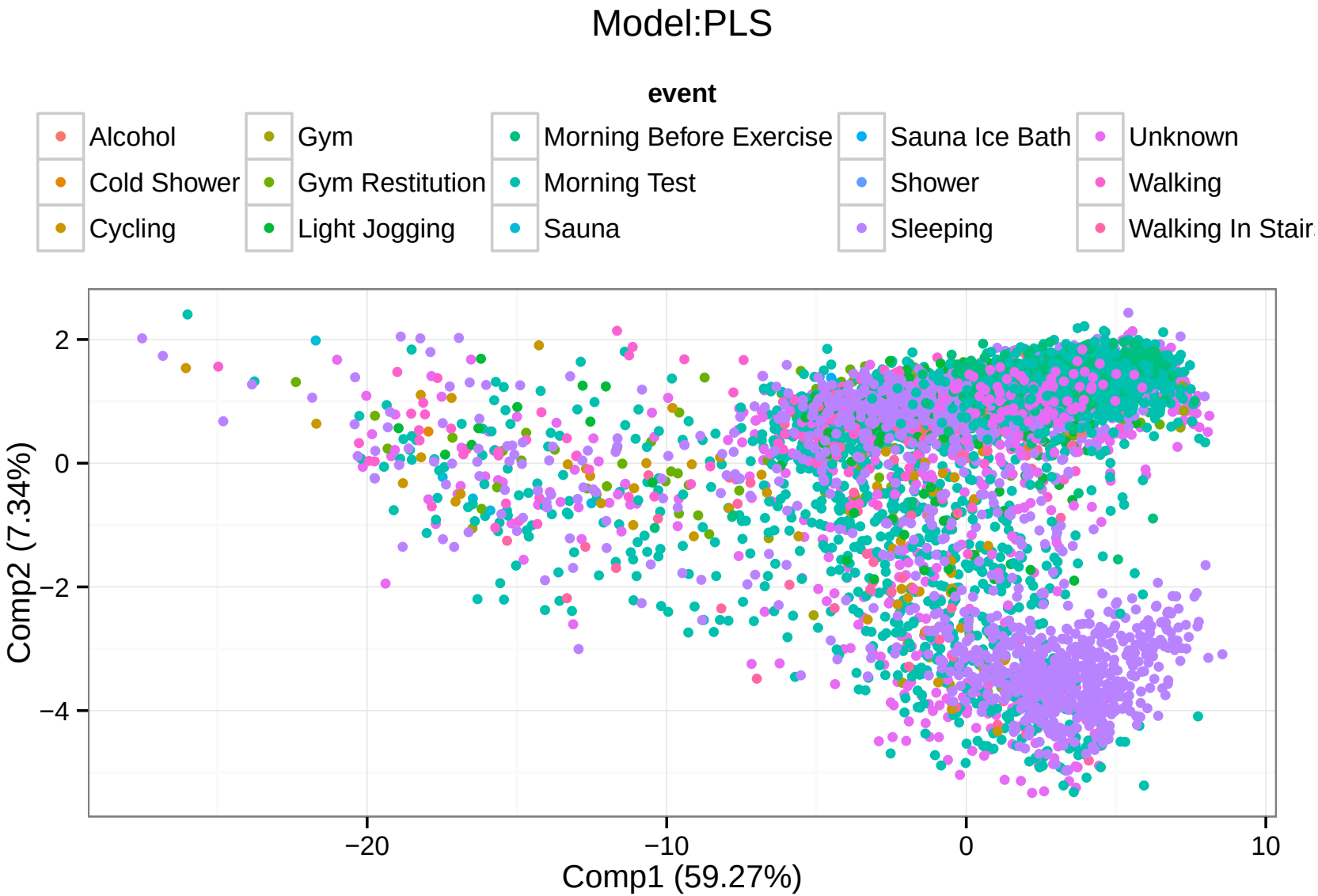


Scoreplot for PCR model

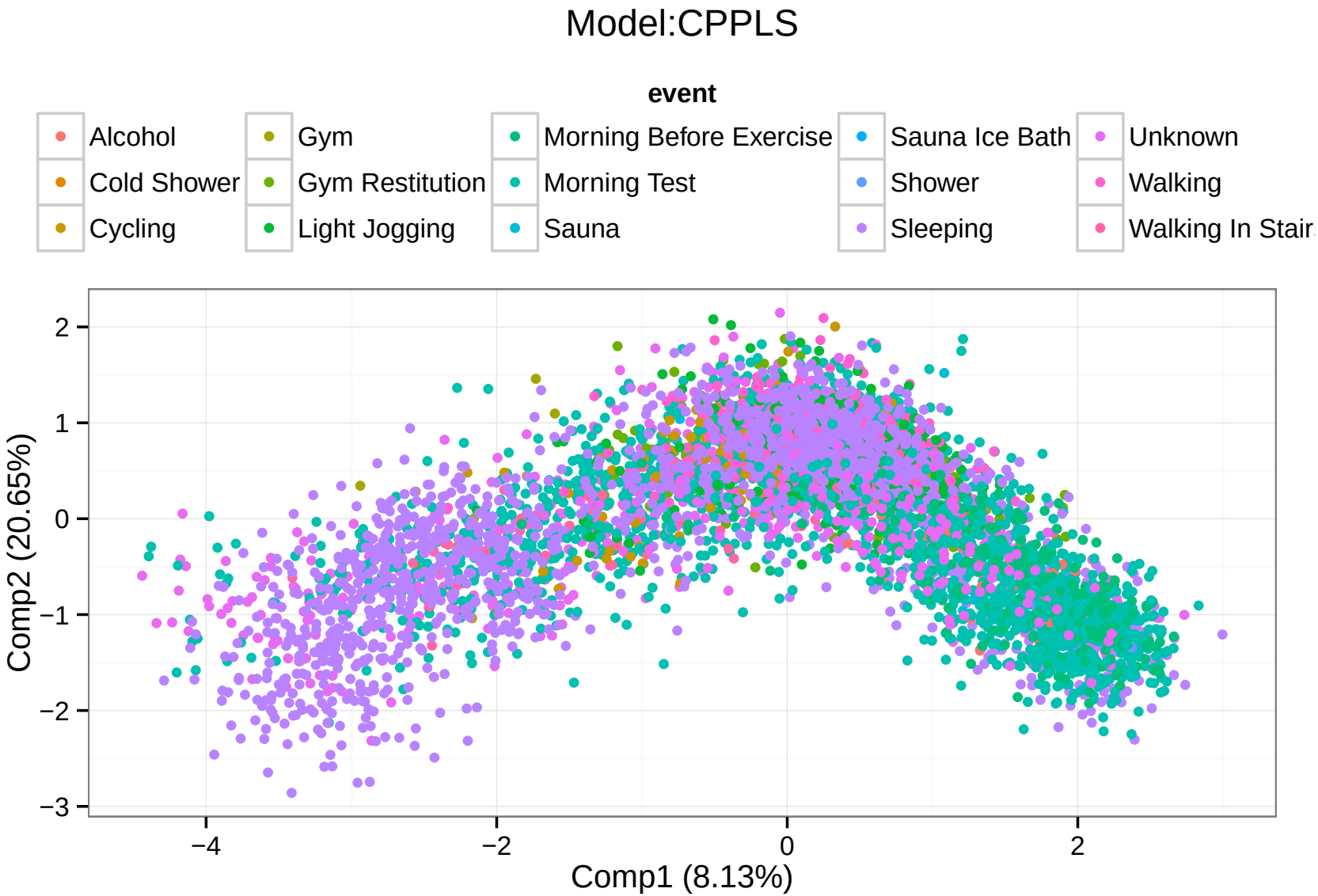


Plotting Scores

Scoreplot for PLS model

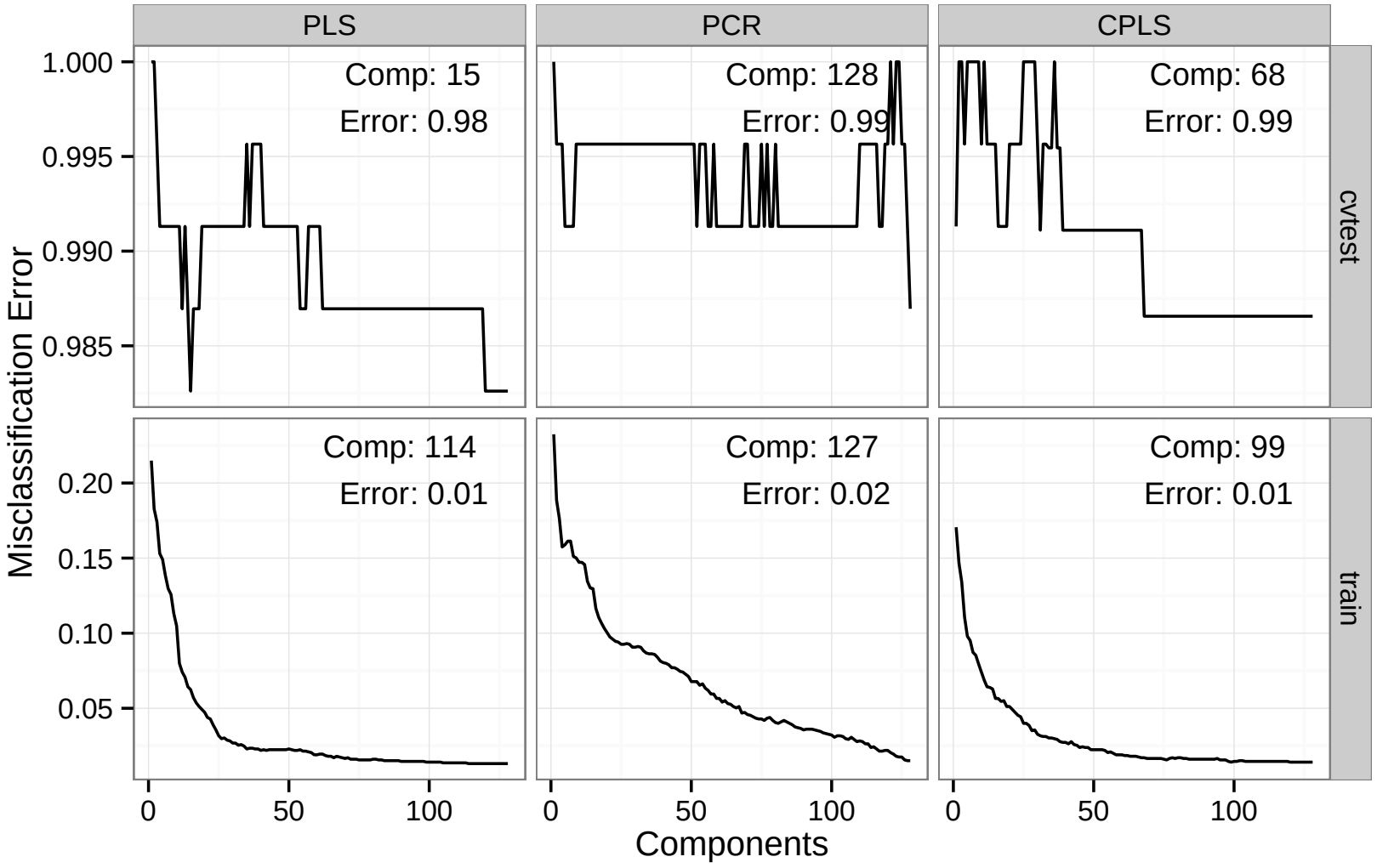


Scoreplot for CPPLS model



Classification with series averaged over Series-Event Combination

Training and Cross-validation Errors



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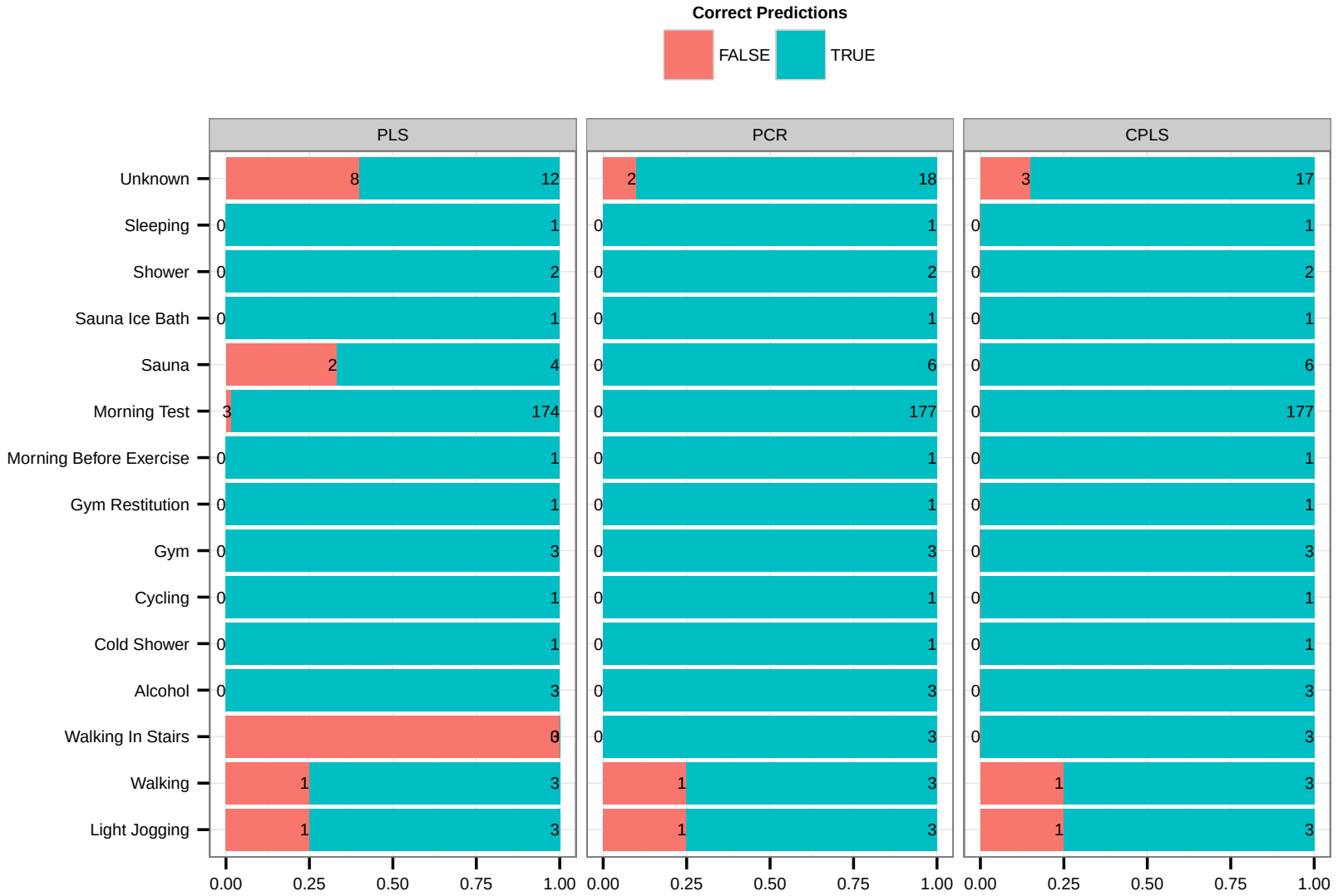

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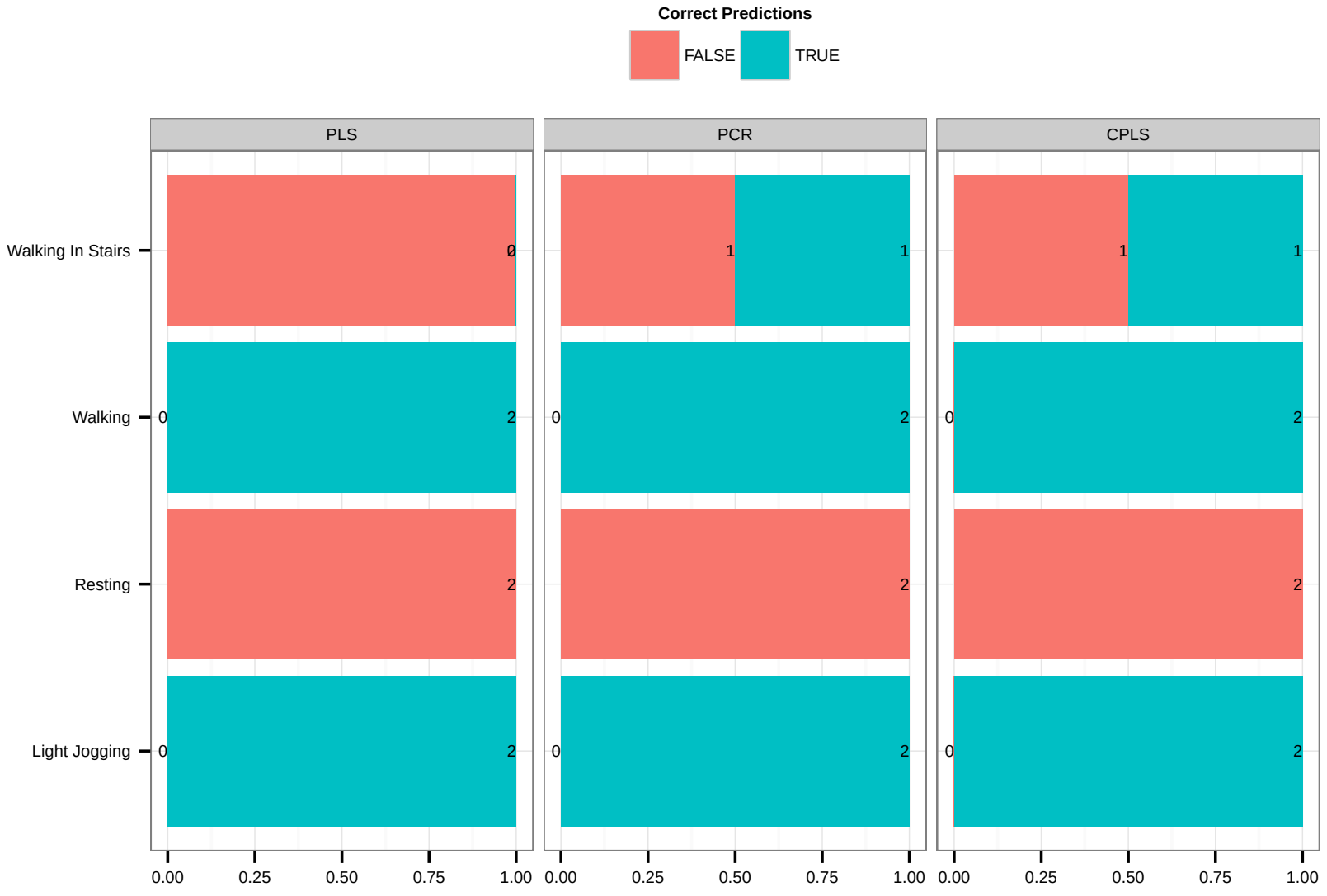

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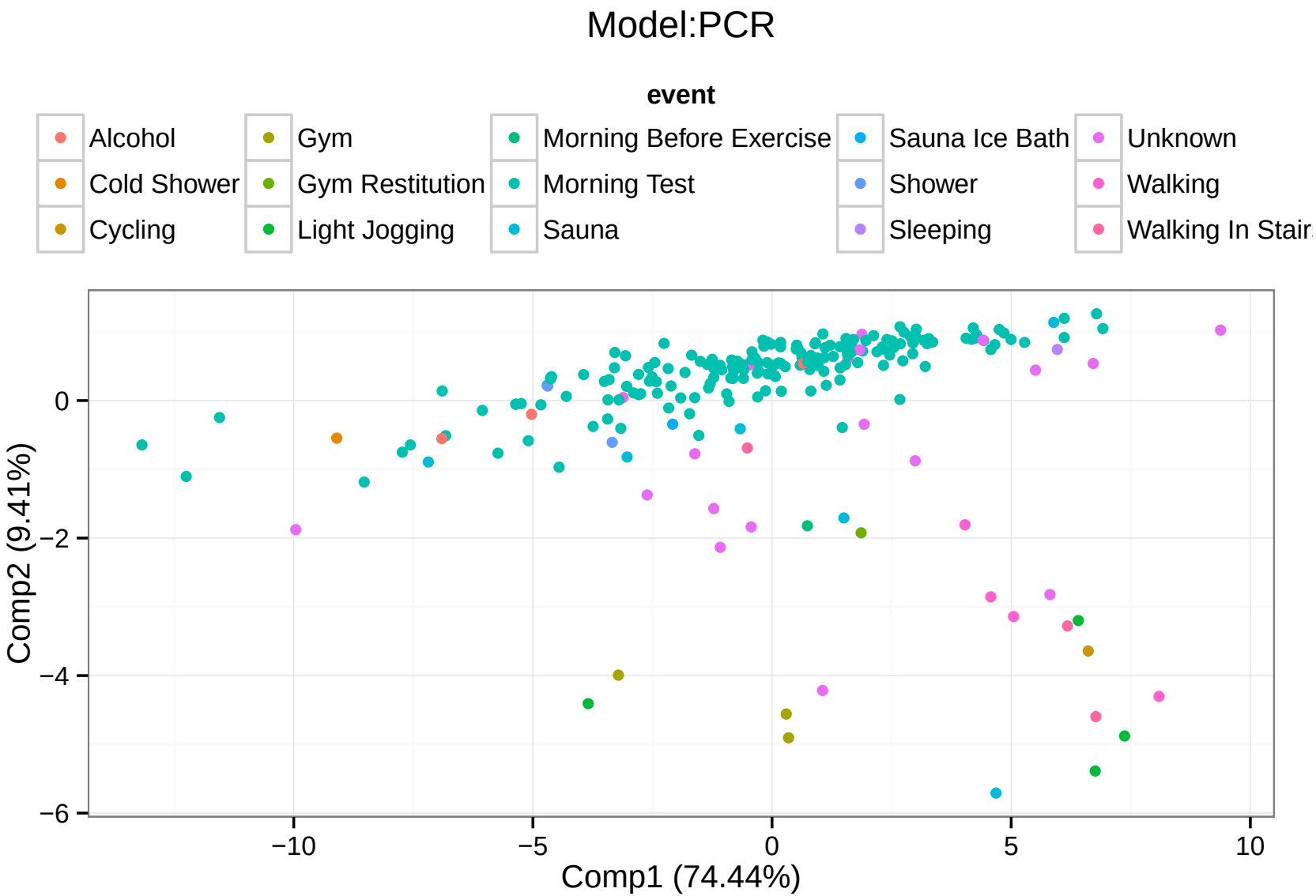
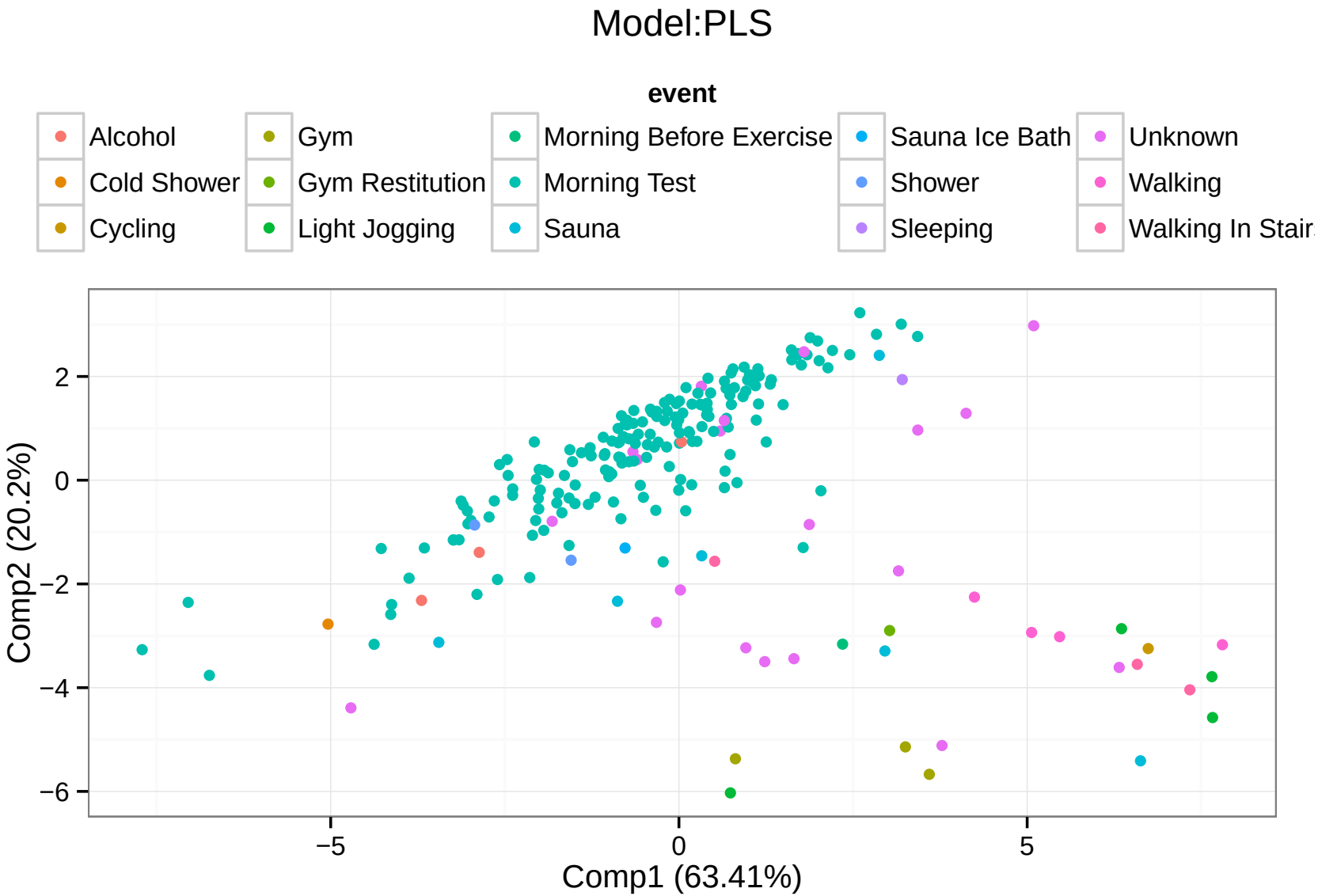


Scoreplot for PLS model



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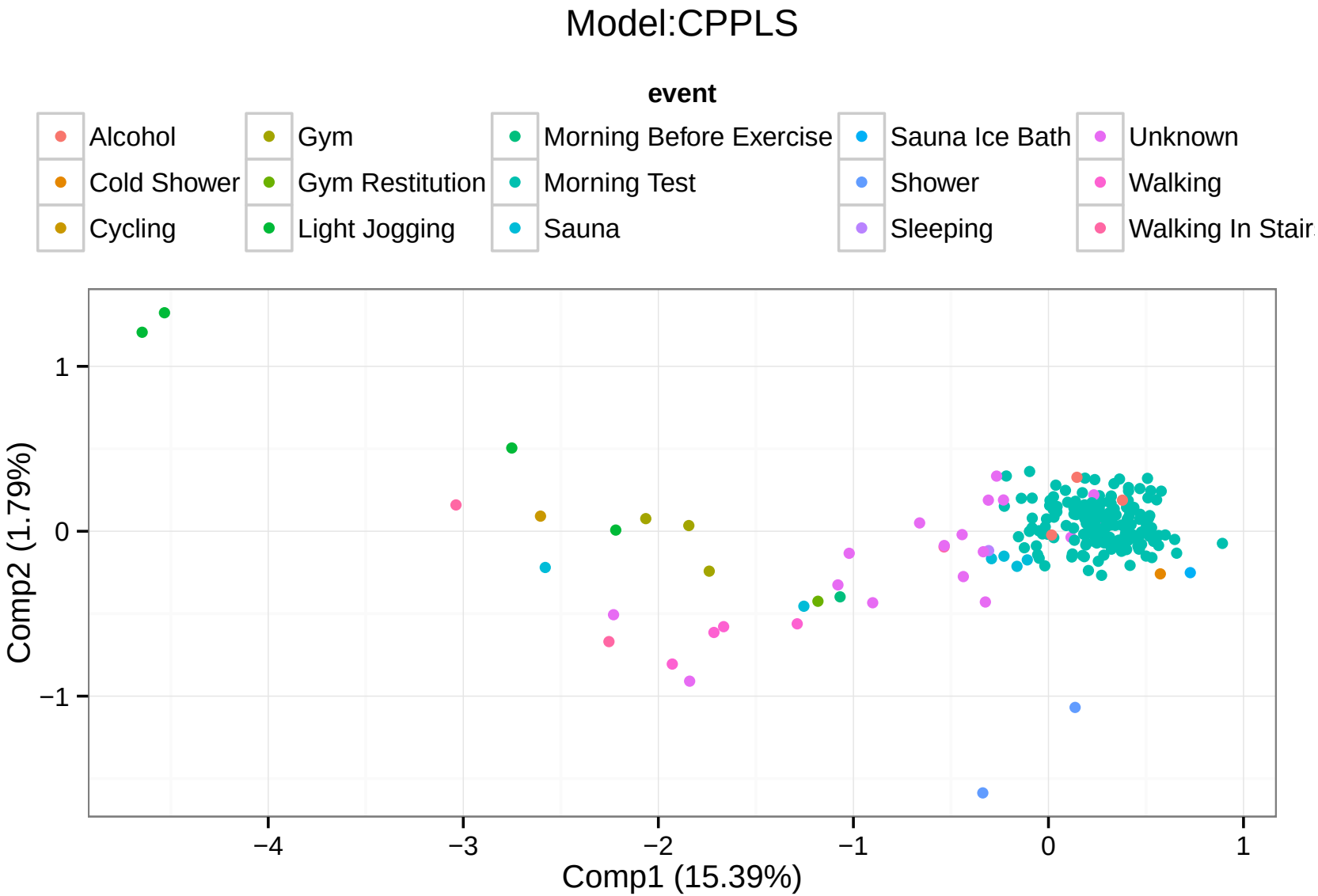
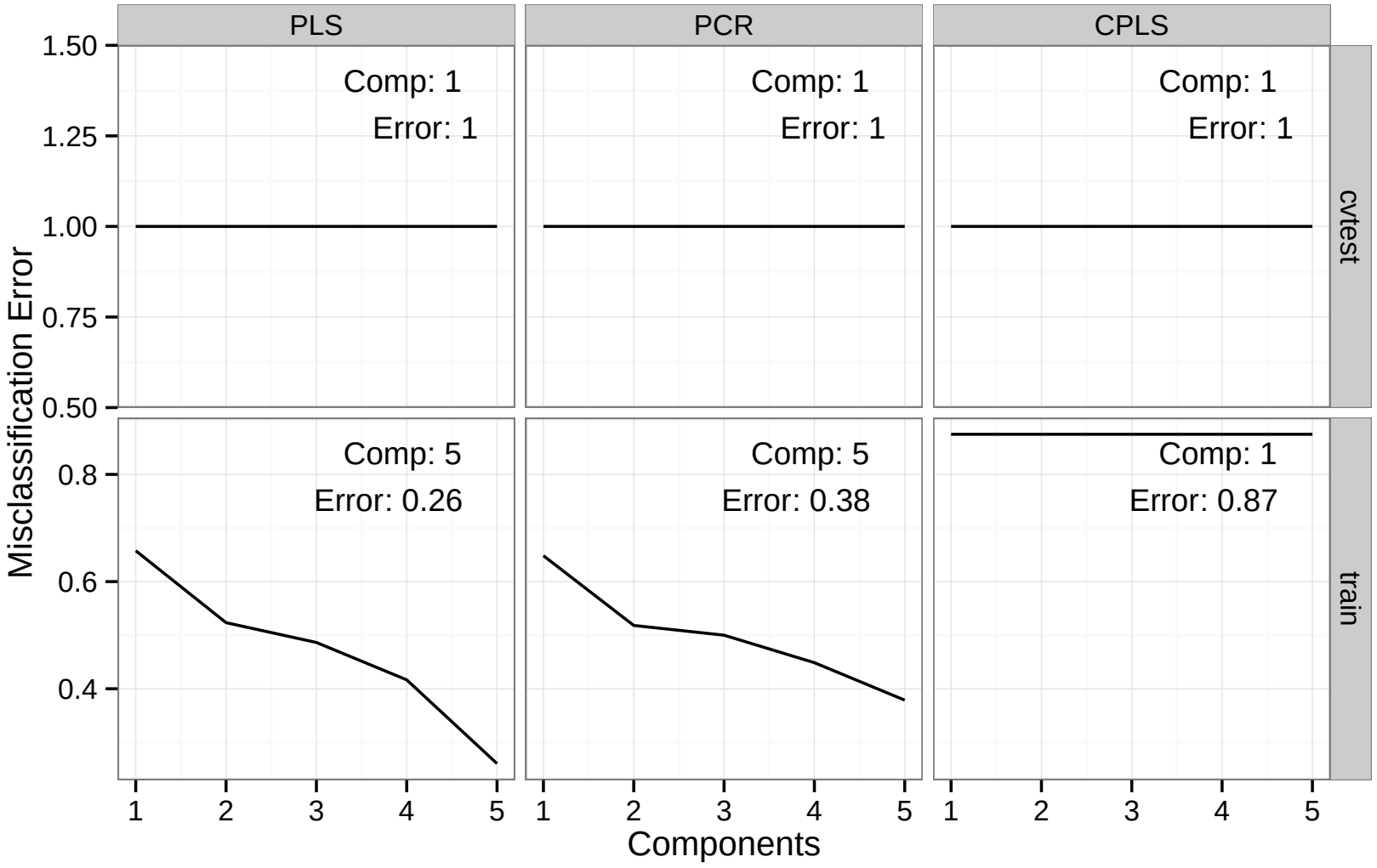


Classification with series averaged over Person-Event Combination

Training and Cross-validation Errors



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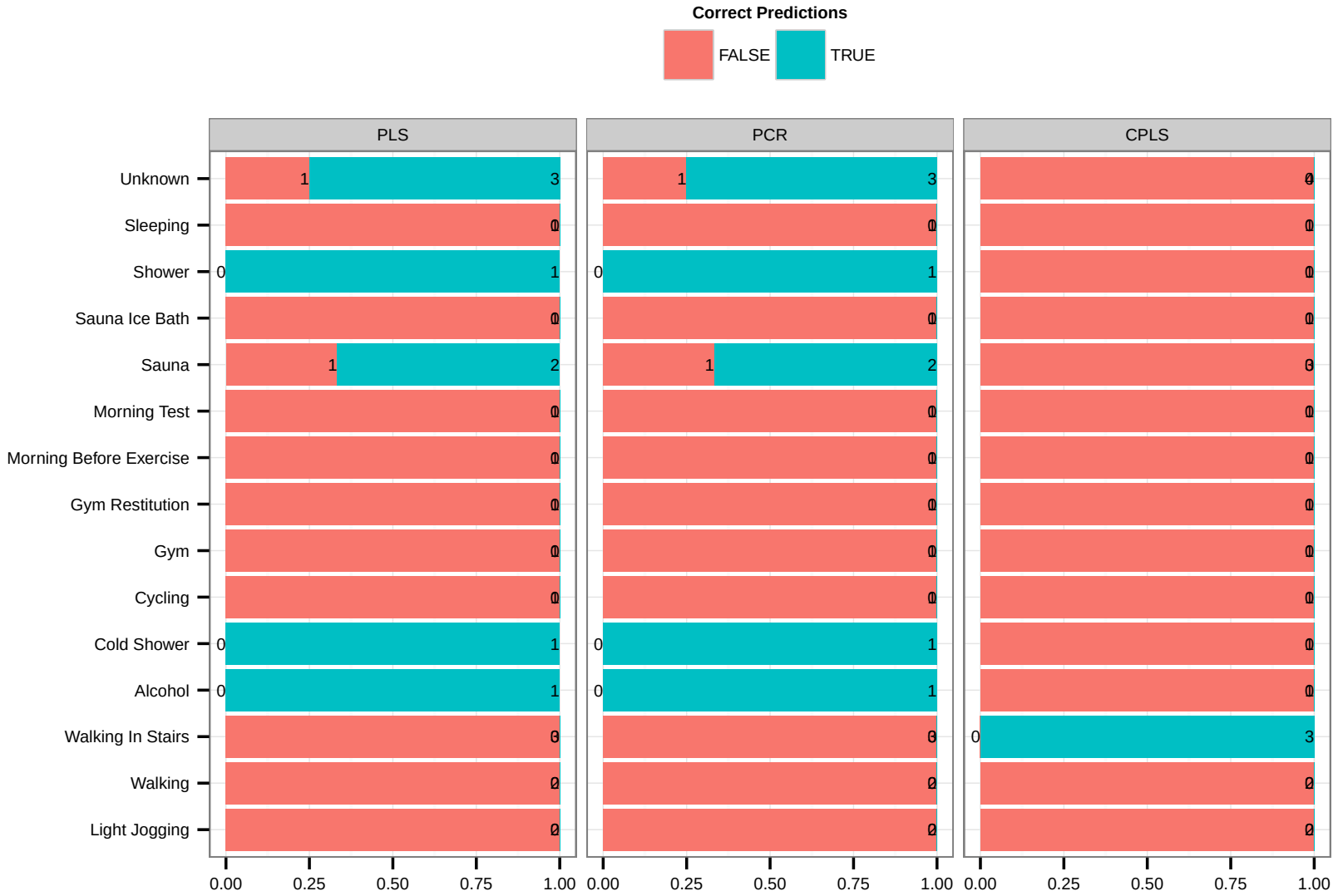

Misclassifications

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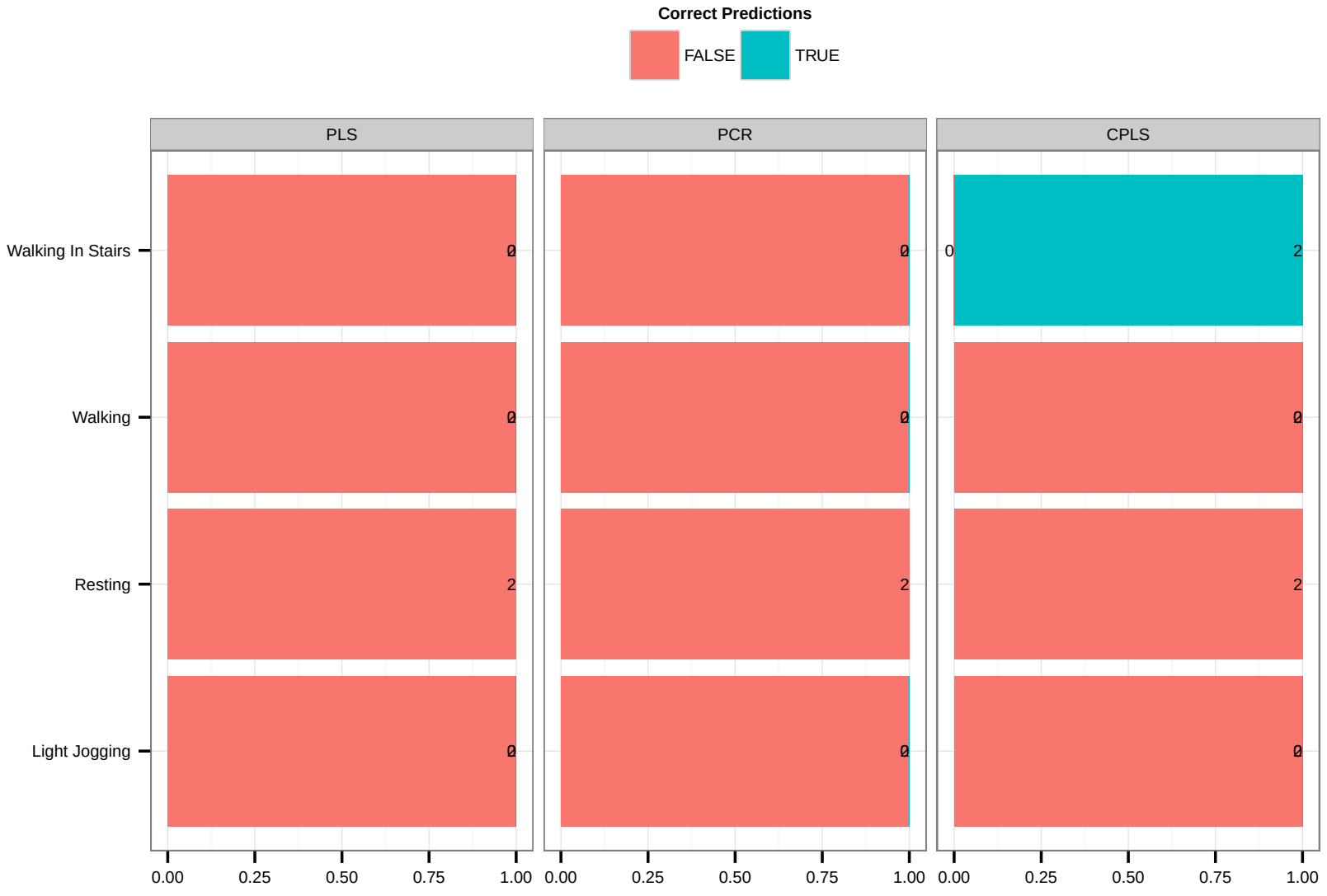

Plotting Scores

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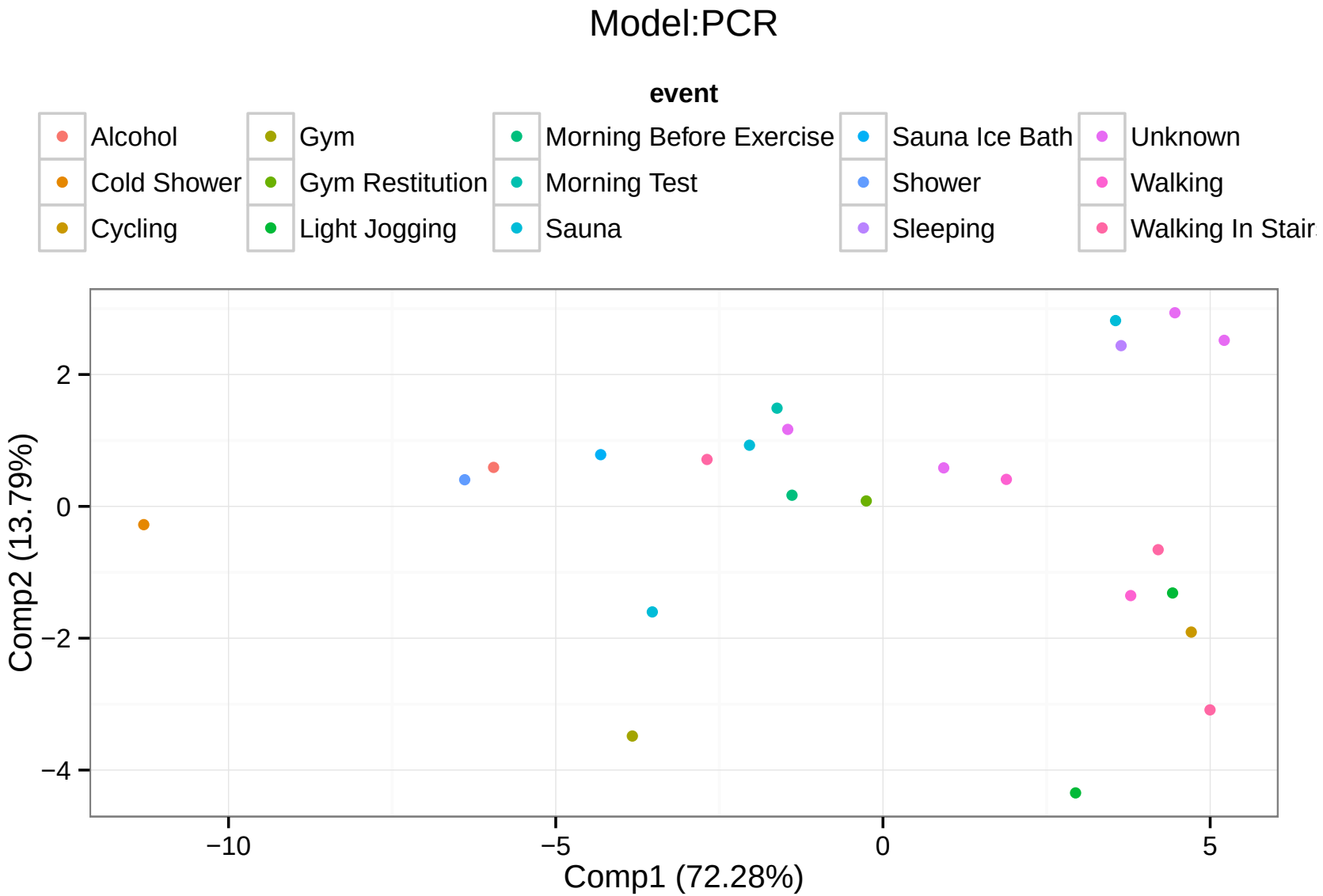

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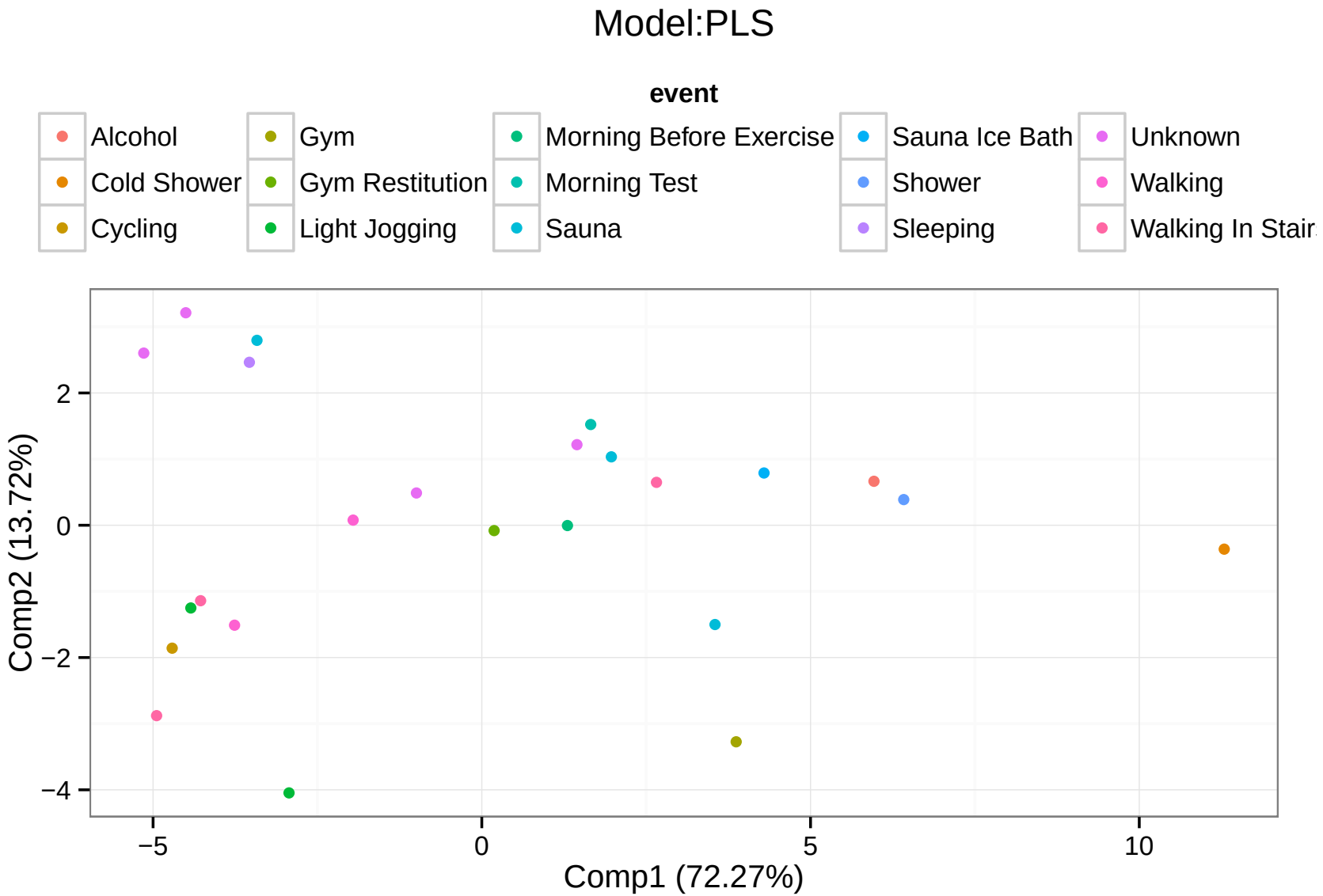

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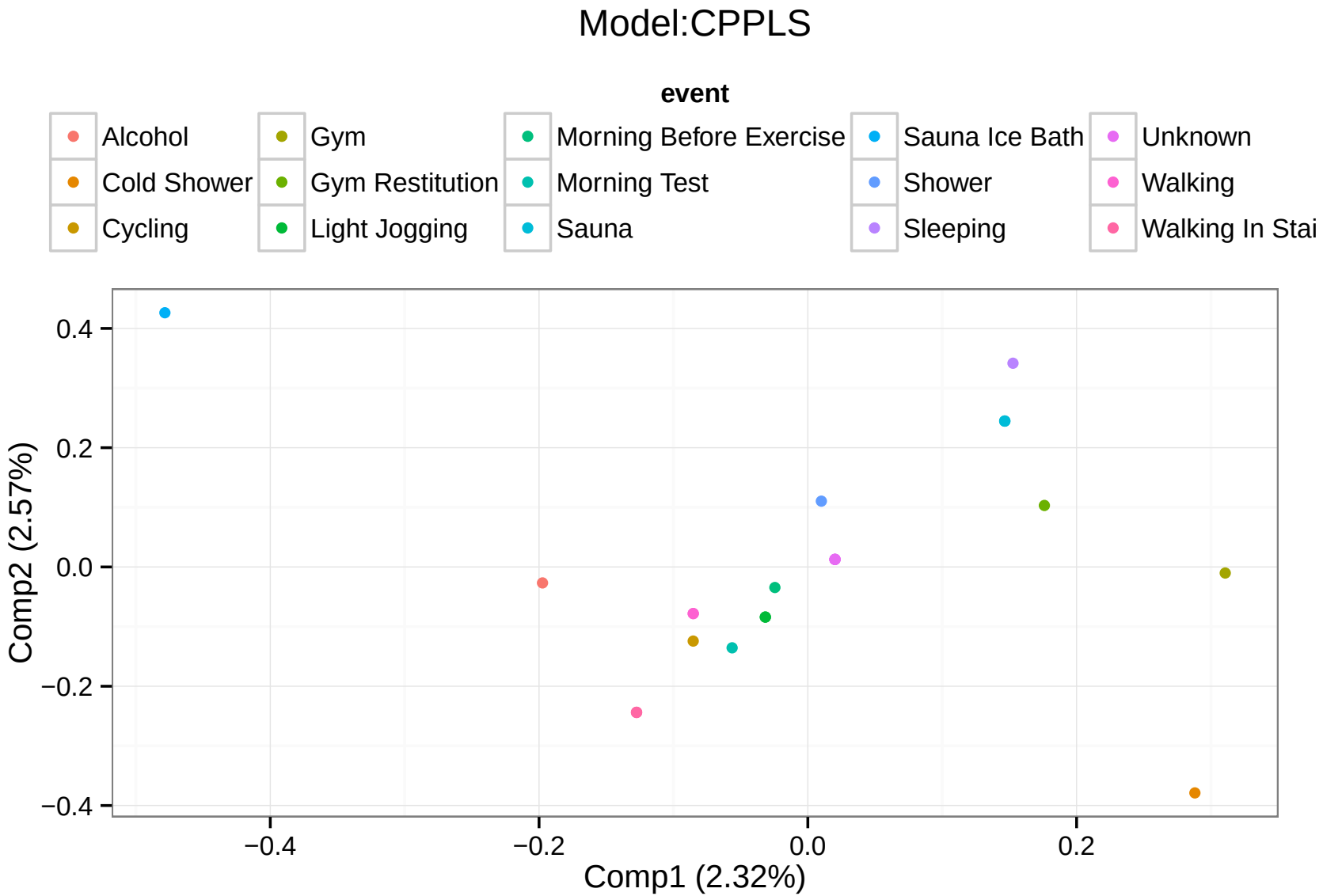

Some Comparison

Misclassification Errors

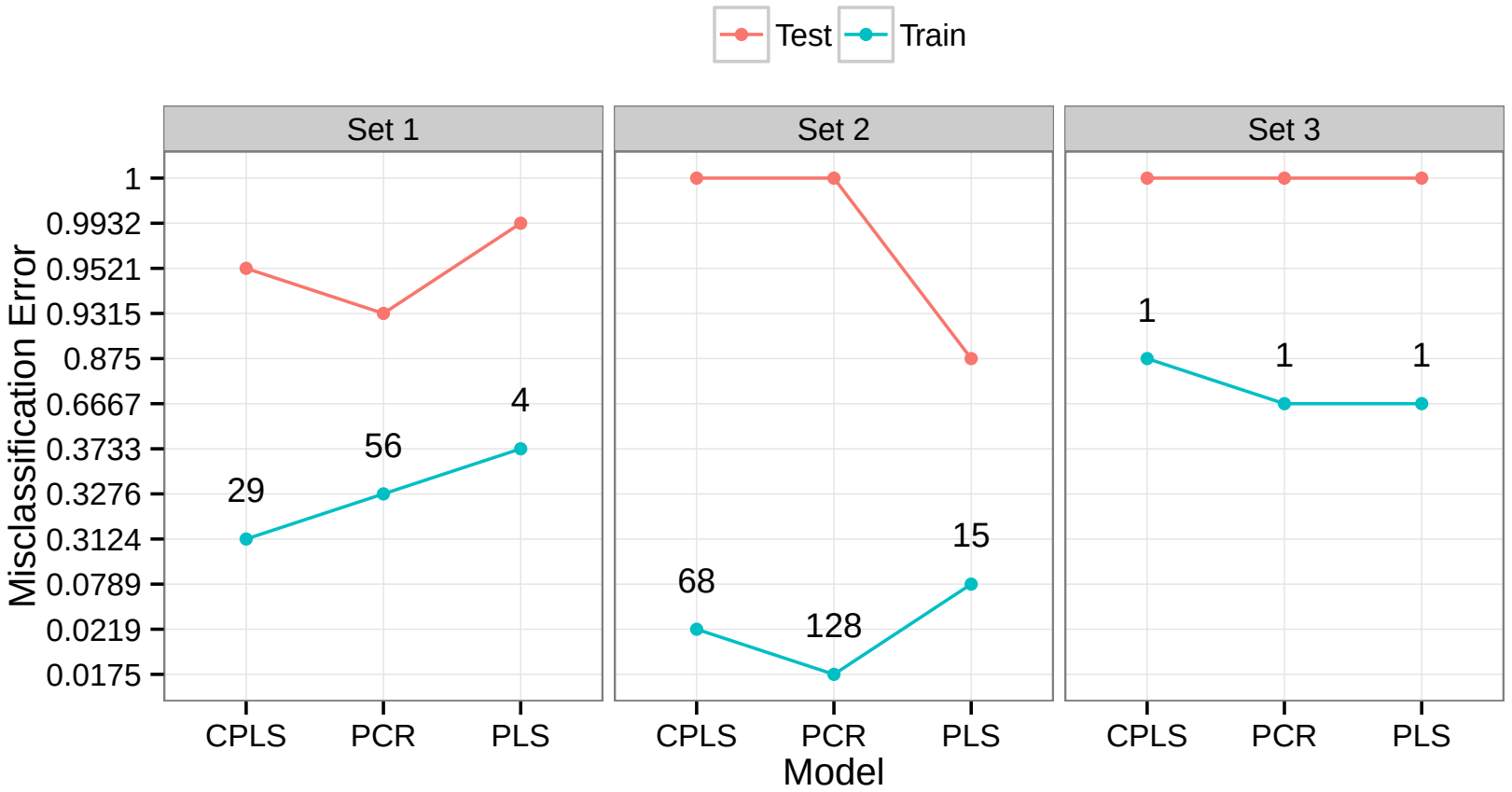

Figure: Training and Test Misclassification Error for all the three models. The LDA models were fitted with the scores obtained from three models with components (number above each points) needed to get minimum cross-validation error.

References

[1] Harald Martens and Magni Martens. *Multivariate analysis of quality: an introduction*. John Wiley & Sons, 2001.