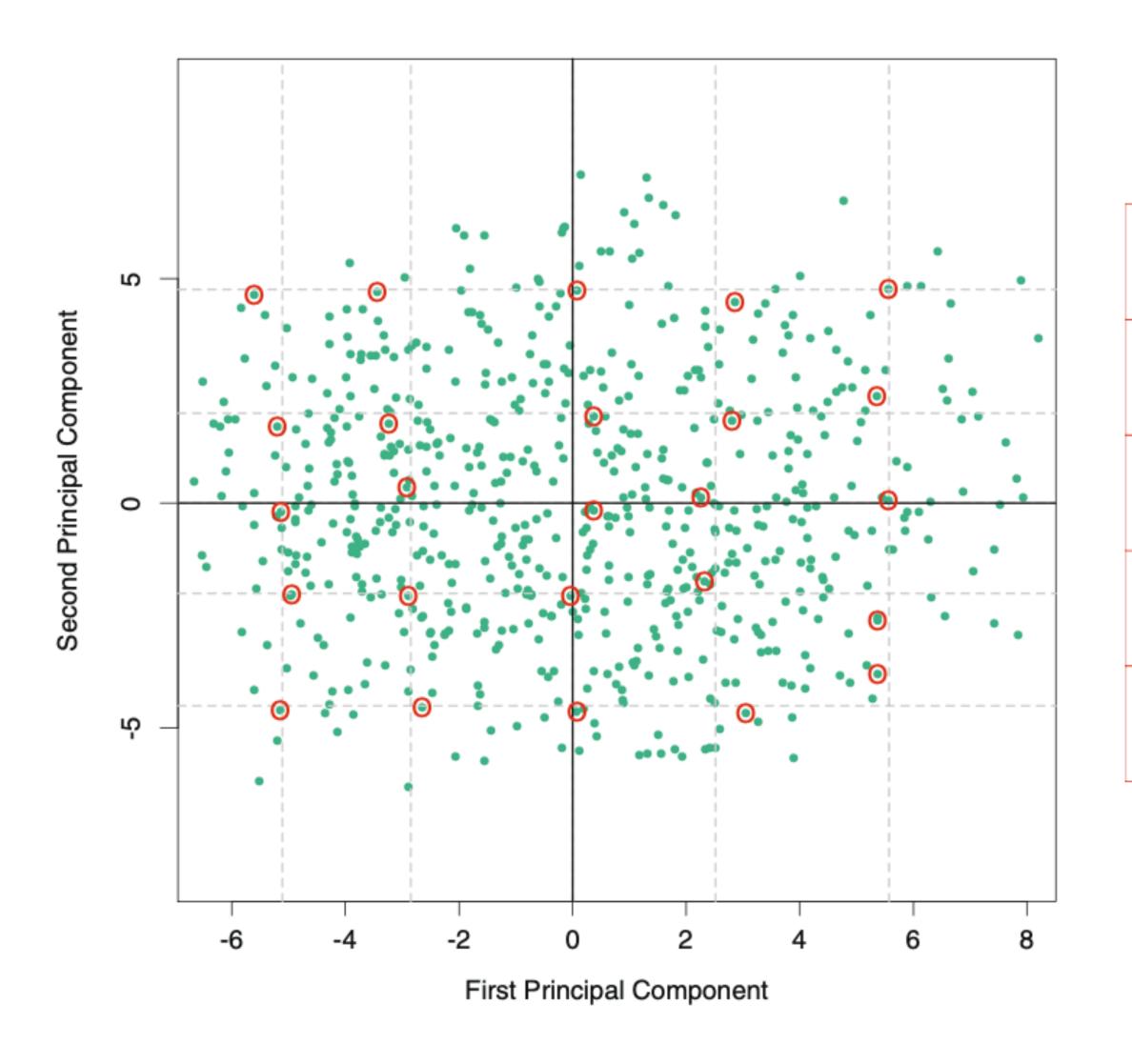
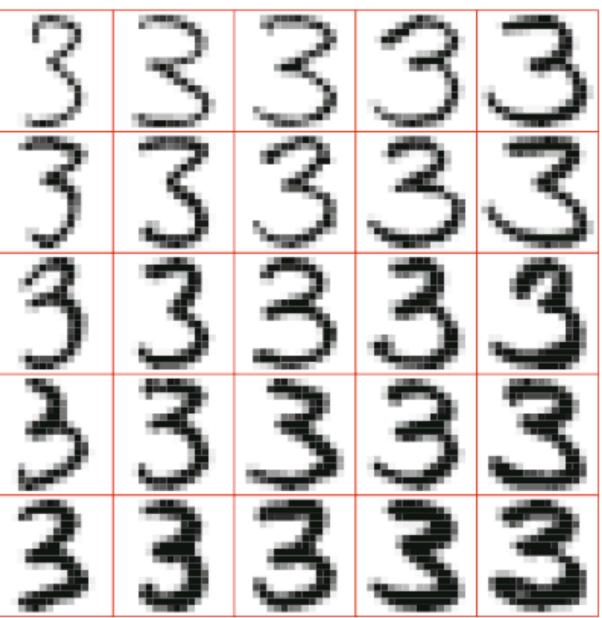
Independent Component Analysis

Applications

PCA







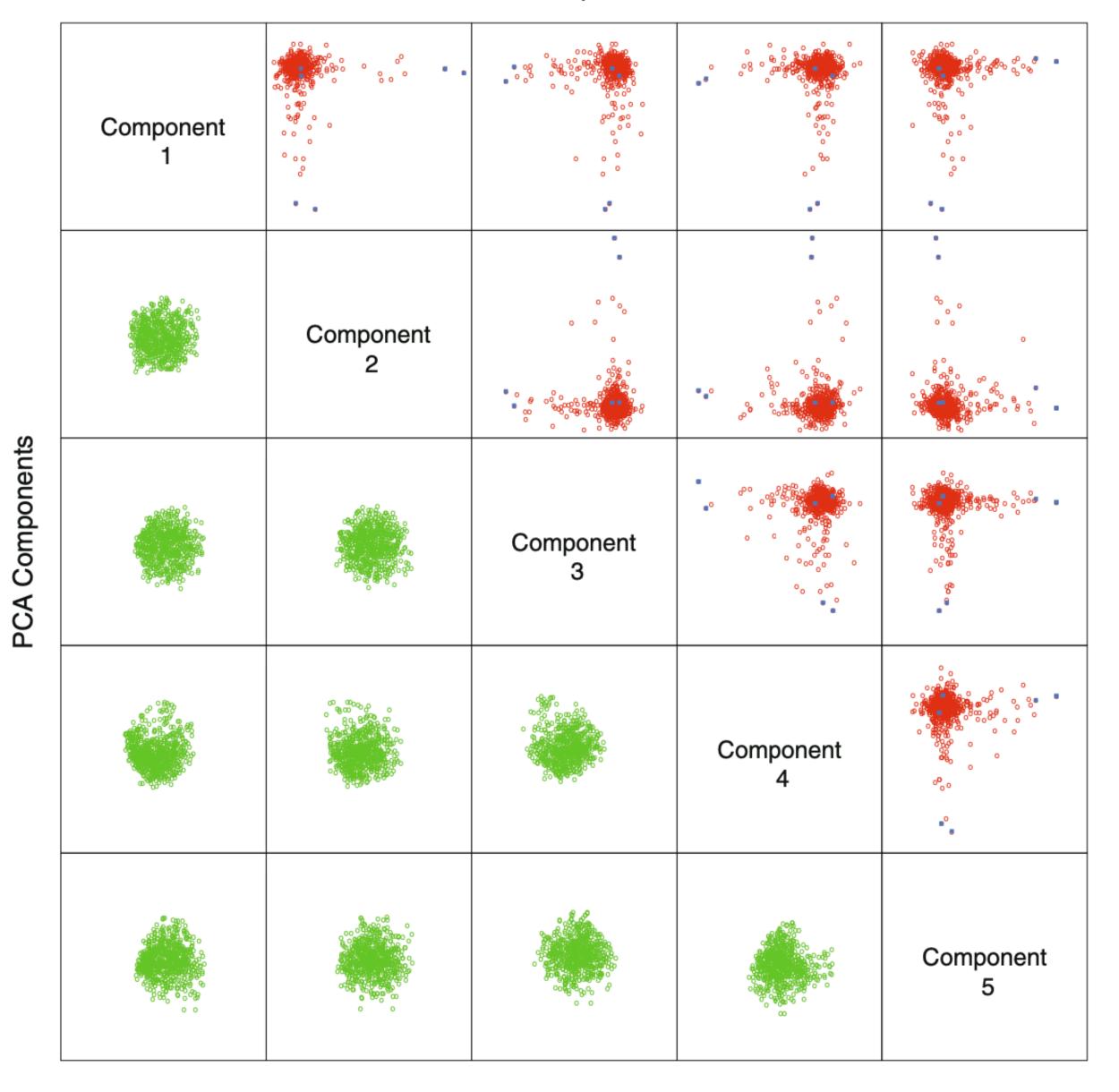
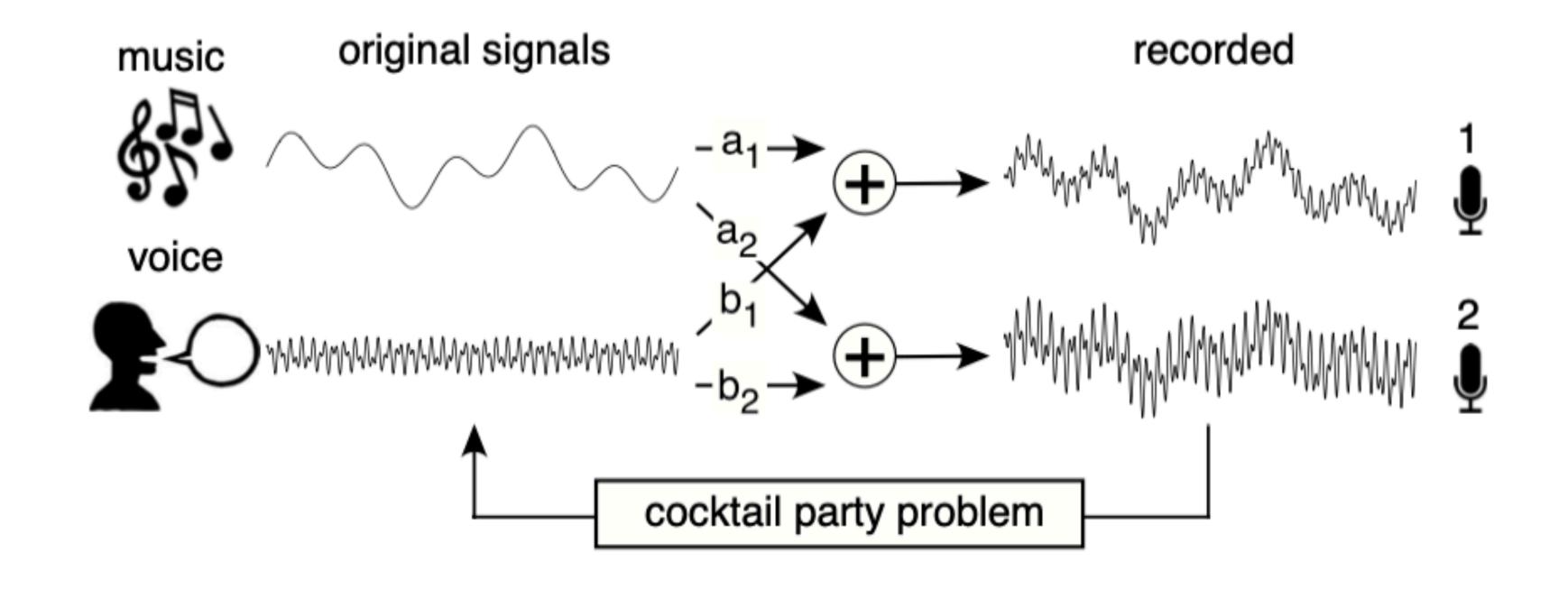
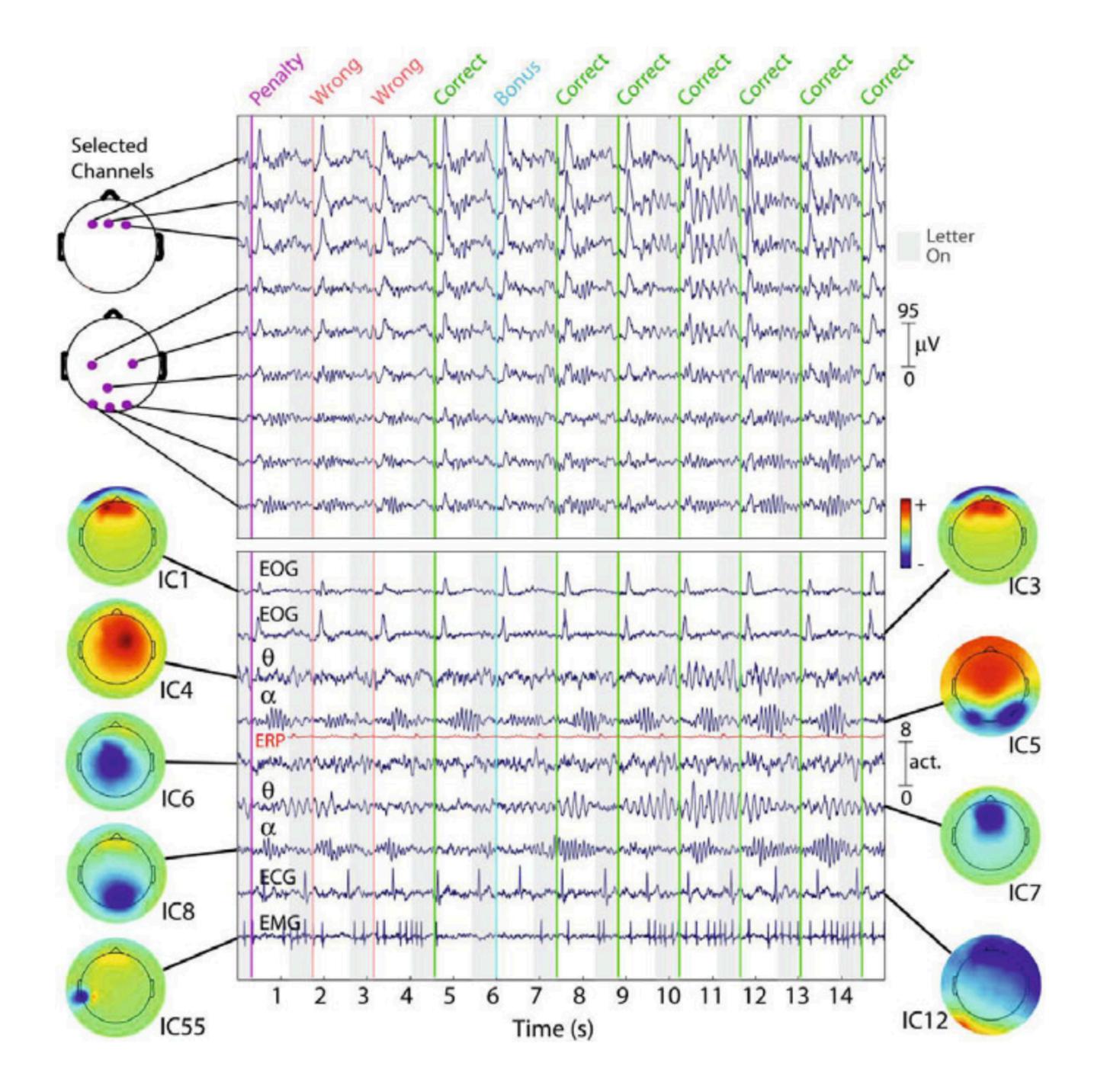


FIGURE 14.39. A comparison of the first five ICA components computed using FastICA (above diagonal) with the first five PCA components(below diagonal). Each component is standardized to have unit variance.





A Tutorial on Independent Component Analysis



Neural Networks

Jonathon Shlens*

Google Research Mountain View, CA 94043

arXiv:1404.2986v1

Springer Series in Statistics

Trevor Hastie Robert Tibshirani Jerome Friedman

The Elements of Statistical Learning

Data Mining, Inference, and Prediction

Second Edition



Neural Networks 13 (2000) 411-430

www.elsevier.com/locate/neunet

Invited article

Independent component analysis: algorithms and applications

A. Hyvärinen, E. Oja*

Neural Networks Research Centre, Helsinki University of Technology, P.O. Box 5400, FIN-02015 HUT, Helsinki, Finland Received 28 March 2000; accepted 28 March 2000

Challenges

- 1. Basics of SVD and PCA (basics.ipynb)
- 2. Semantics of PCA and ICA (semantics.ipynb)
- 3. Simulations (simulations.ipynb)
- 4. Exoplanet data (exoplanet.ipynb)
- 5. Many more in Kaggle....