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Multiverse Analysis: Practical Session (EEG)

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Multiverse Analysis - EEG

EEG multiverse analysis example

Model:

Extraversion ~ *f*(happiness LPP - neutral, anger LPP - neutral, fear LPP - neutral, surprise LPP - neutral, sadness LPP - neutral, disgust LPP – neutral)

Data:

Sample: 98 healthy adults (M_{age} = 26.64, SD_{age} = 4.82)

Extraversion: NEO Personality Inventory Revised (M = 2.26, SD = 0.43)

Emotion recognition task with EEG recording:

6 dynamic emotional expressions

- *happiness, sadness, anger, fear, disgust, surprise*

1 dynamic neutral expression

- *either chewing or blinking*

42 EEG electrodes

Multiverse Use Case:

Baseline correction (2)

- -100m
- -200ms

Reference (2)

- Common average reference
- Linked mastoids

Time Window for LPP quantification (4)

- 400 – 600ms
- 500 – 700ms
- 450 – 750ms
- +/- 200 ms around subject average peak

Electrode cluster for LPP quantification (4)

- P3, P4, CP1, CP2
- P3, Pz, P4
- CP1, CP2
- Pz

Cartesian product: 2 * 2 * 4 * 4 = **64 pipelines**

Don't get lost in the Garden of Forking paths

Think carefully about the analytical choices you can make!

Thank you for attending this workshop!

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