Statistics and R short course

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Session 6 - Practical

Exercise 1

- Return to the `Orthodont` dataset. We did not specify explicitly whether to use ML or REML estimation. Rerun the LMM we fitted for this dataset, but now with ML rather than REML estimation.
- Return to the `sleepstudy` dataset. Find out how you would specify different covariance structures and try out models with different structures.

Exercise 2

Download the dataset `autism.csv` from GitHub.

This dataset was collected by University of Michigan researchers and has data from a prospective cohort study of 214 children. The file you downloaded is a subset of 158 children with autism spectrum disorder.

The dependent variable is VSAE - Vineland Socialisation Age Equivalent - a combined, numerical score that includes assessment of interpersonal relationships, play/leisure time activities and coping skills.

Language development was assessed using the Sequenced Inventory of Communication Development scale and children were classified according to this (variable `sicdegp`).

The other two variables in the dataset are the child's age (`age`) at each visit and the child ID (`childid`).

Explore the dataset and develop a model for `vsae`.