Summary of examples and exercises

Week 1: Introduction to MLM

* Lecture
  + Visual search (VisualSearchEx.rda)
* Live coding
  + Falsehood repetition (<https://osf.io/skmw5>) [new example, public data set]
* Lab
  + Toy dataset
  + Basketball / Heart Rate Variability

Week 2: Logistic MLM, LDA using MLM – Linear change

* Lecture
  + Part 1, Logistic MLM: Novel word learning – retention (nwl.RData)
  + Part 2, LDA using MLM – Web-based CBT
* Live coding
  + Part 1, Logistic MLM: Test-enhanced learning (without crossed random effects), bouba/kiki around the world
  + Part 2, LDA using MLM – Linear change: Weight loss maintenance
* Lab
  + Novel word learning

Week 3: LDA using MLM – non-linear change

* Lecture
  + Target Fixations (VWP)
* Live coding
  + Target fixation (VWP) – logistic
* Lab
  + Alzheimer’s cognitive decline

Week 4: Other random effects structures

* Lecture
  + Part 1, 3-level nesting: Active math learning
  + Part 2, crossed ranef: Problem solving
* Live coding
  + Group (b/w) and domain (w/i) effects – crossed random effects, simplifying to convergence [last year’s Week 5 – first part of lab]
* Lab
  + Part 1, 3-level nesting: Treatment effects [last year’s Week 4 – Exercise 3]
  + Part 2, crossed ranef: Test-enhanced learning [last year’s Week 4 – Exercise 2]

Week 5: Individual differences

* Lecture
  + Part 1: Deviant behaviour
  + Part 2: EducMH
* Live coding
  + ???
* Lab
  + Group (b/w) and domain (w/i) effects over time