

Earlier Dyslexia detection

## NEUROIMAGING TECHNIQUES

Aleix Canals Pou  
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## INTRODUCTION

- Dyslexia
  - Learning disability that manifests itself primarily as a difficulty with written language.
  - Students who have dyslexia demonstrate an inability to attain language skills
  - About 10% of population

## INTRODUCTION

- One of the main causes of learning difficulties
- Many times there is an incorrect diagnosis
- With a correct and early diagnosis and support students will learn normally

## OBJECTIVES

- The main goals of the experiment are:
  - Detect neurological differences between dyslexic and not dyslexic children
  - Find a way to detect earlier and correctly dyslexia
  - Be able to classify children by doing a set of test

## HYPOTHESIS

- Dyslexics brains have physiological differences
- We can find the difference between dyslexics children and children with other learning difficulties.

## METHODS

- Subjects
  - 20 children from 2nd degree with low reading skills
  - 10 children from 1st degree with average reading skills
  - Subjects will not show any psychological problem and will have a normal IQ.

## METHODS

- Tasks
  - Listen to the instructions with closed eyes
  - Read 5 short sentences
  - Listen and repeat 5 short sentences
  - Listen to 5 geometrical figures and draw it

## MATERIALS

- The final goal is have a method to detect dyslexic children.
- We will use an EEG
  - More comfortable for a child
  - Patient are able to move
  - Cheaper
  - We do not need high resolution

## PROBLEMS

- The difference at this age may not be enough to classify a child as a dyslexic
- The EEG may not detect the differences
- Children may be too nervous.

