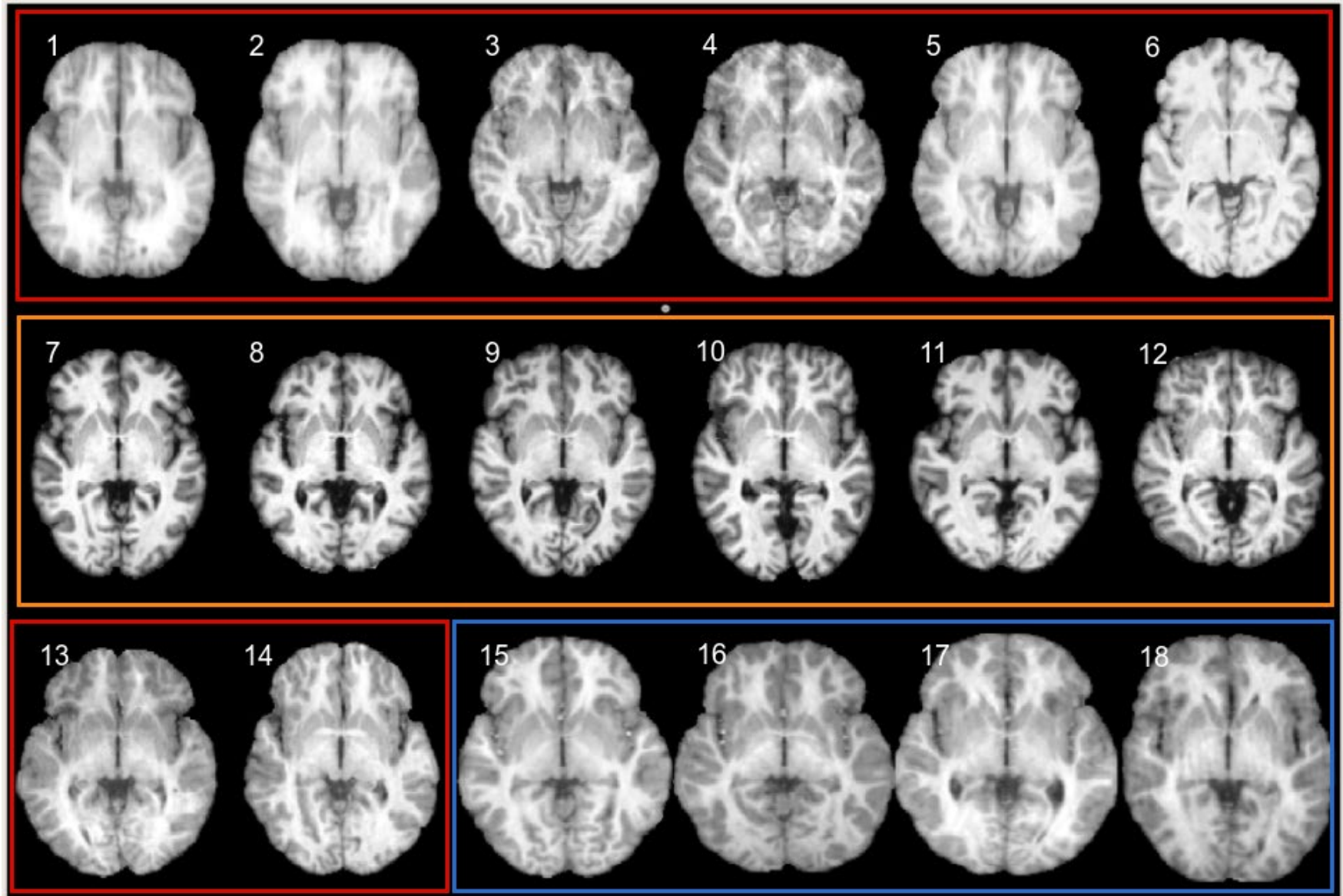# Medical Image Segmentation and Applications (MISA)

IBSR18 PROJECT

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Universitat de Girona

Challenge: IBSR18 Dataset

Project objective

Brain tissue segmentation

- Three tissue classes

  - WM, GM, CSF masks

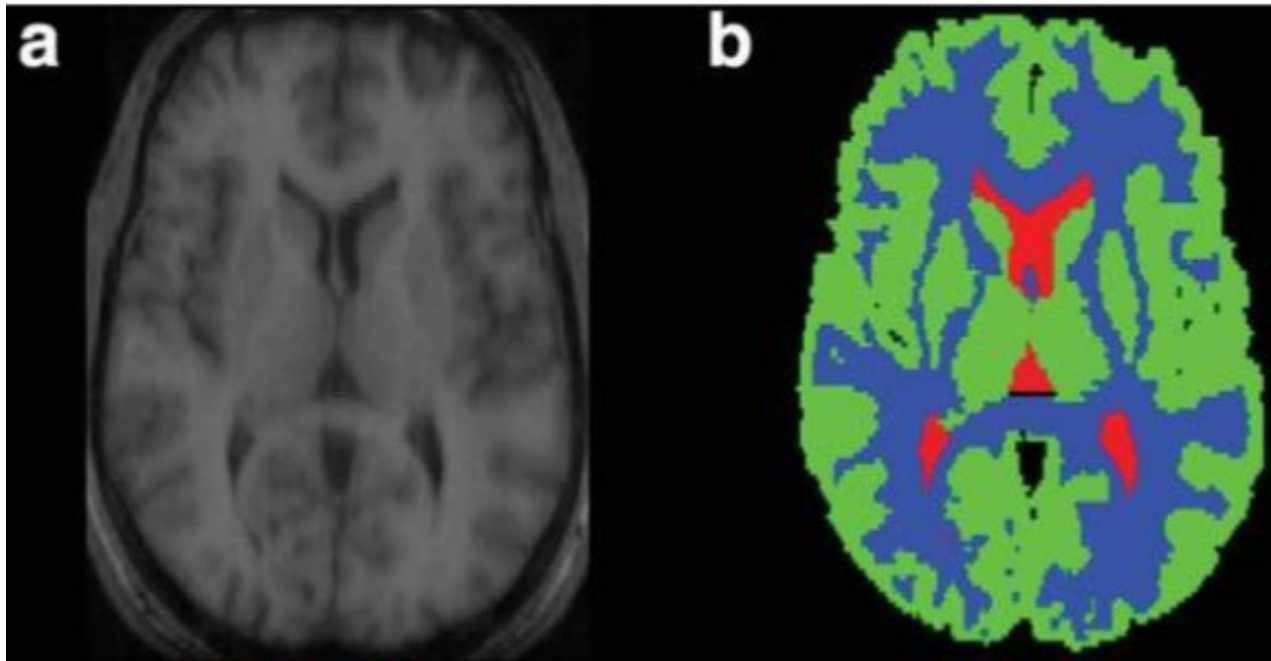# Image sets

- 10 images for training (with GT)

  - Can be used for any purpose (ex. train a supervised system, build an atlas, or implement a multi-atlas approach)

- 5 images for validation (with GT)

  - You will use it to provide quantitative (DSC, HD and AVD) and qualitative evaluation

- 3 images for testing (NO GT)

  - Will be used to perform a competition among groups. The ranking will take into account the similarity of the submitted tissue masks wrt the GT (only one submission per group)

Expected task

- Study the IBSR dataset and propose a segmentation solution

  - Choose a good strategy
  - Choose the appropriate features / classifiers
  - Which methods perform best given specified training data?

- Test the proposed solutions on the supplied data

  - Provide results for all the validation images (you could also report training results if needed)
  - Explain all the strategies analysed and solutions and improvements

Agenda

setembre 2024

dl.	dt.	dc.	dj.	dv.	ds.	dg.
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
A 23	24	25	26	27	28	29
B 30						

octubre 2024

	dl.	dt.	dc.	dj.	dv.	ds.	dg.
P1 B		1	2	3	4	5	6
P2 A	7	8	9	10	11	12	13
B	14	15	16	17	18	19	20
A	21	22	23	24	25	26	27
		28	29	30dvB	31		

P3 Atlas (MIRA + MISA)

- ☐ Lectures
- ☐ Lab sessions
- ☐ Seminars
- ◯ Final Project

novembre 2024

	dl.	dt.	dc.	dj.	dv.	ds.	dg.
					1	2	3
B	4	5	6	7	8	9	10
A	11	12	13	14	15	16	17
B	18	19	20	21	22	23	24
A	25	26	27	28	29	30	

desembre 2024

	dl.	dt.	dc.	dj.	dv.	ds.	dg.
A							1
B	2	3	4	5	6	7	8
A	9	10	11	12	13	14	15
B	16	17	18	19	20	21	22
	23	24	25	26	27	28	29
	30	31					

MISA Exam: 08/01/2025
Deadline Final Project: 13/01/2025

Good luck!!!
Hope you will enjoy this project!

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