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Multimodal MRI-based classification of Alzheimer's disease

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Stellingen behorend bij het proefschrift

Multimodal MRI-based classification of Alzheimer's disease

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1. Combining multiple MRI atrophy measures improves Alzheimer's disease classification. *This thesis*

2. Combining multiple functional connectivity measures from a resting state fMRI scan improves Alzheimer's disease classification. *This thesis*

3. Alzheimer's disease classification models based on anatomical MRI scans generalise better across different scan sites than models based on diffusion weighted MRI scans and resting state functional MRI scans. *This thesis*

4. Baseline MRI scans contain only limited information on future cognitive decline. *This thesis*

5. To make MRI scans better suitable for clinical research, we need norms for harmonising scanner hardware and software across different scanning sites.

6. Doctors prefer models that are maximally accurate and also easily interpretable, but these two are not easily combined. *Adapted from Galit Shmueli (2010)*

7. When looking for small clinical improvements, you need a very large sample size to show these improvements are not due to random chance fluctuations.

8. It is unnecessary, and overly complex, to use the value of every single voxel for Alzheimer's disease classification. Averaging over brain regions is simpler and as good.

9. Medical science, these days, yields too many very complicated 'proof of principle' papers that will likely never make it to clinical practice.