

Propositions accompanying this thesis

Quantitative Imaging Biomarkers for Hippocampus-based Dementia Prediction

1. Using tissue distributions instead of MR intensities for appearance based segmentation yields almost the same segmentation accuracy while being more acquisition independent. (*this thesis, ch 2.*)
2. Out of the possible combinations of hippocampal volume, texture and shape, the combination of hippocampal volume and texture performs best for overall prediction of dementia, but hippocampal shape seems to contain more information for very early detection (*this thesis, ch. 3, 4*)
3. Hippocampal volume, shape, and texture are all predictive for dementia in subjects without objective cognitive complaints. (*this thesis, ch 4*)
4. Spatial regularized shape analysis using P-splines results in smoother coefficient fields that can more easily be interpreted. (*this thesis, ch. 5*)
5. Creating reproducibility and traceability in image analysis workflows is not a trivial matter. (*this thesis, ch. 6*)
6. There is a large difference between finding associations and risk factors in cohort studies and using this information successfully for personalized medicine in clinical practice.
7. The standardized extraction of quantitative imaging biomarkers is paramount for the advancement of the field of medical image analysis and its use in clinical practice.
8. Simplified models using assumptions can be very good for gaining insight into a process, but when applied by people who do not understand or choose to ignore the assumptions this creates problems.
9. "I feel I'm always surrounded by people talking about how important it is to teach other people about programming. But rarely are people saying: it's important to teach programmers about other people" (*Randall Munroe, interview in de Correspondent with Sanne Blauw*)
10. Good research that yields a negative result is still valuable and should not be harder to publish than research yielding positive results.
11. Wisdom comes from experience. Experience is often a result of lack of wisdom (*Terry Pratchett*)

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