

Propositions accompanying the thesis

Development and Assessment of Learning-based Vessel Biomarkers from CTA in Ischemic Stroke

1. Both a deep learning method utilizing vessel features and end-to-end deep learning deliver expert-level performance in collateral scoring tasks. (*Chapter 2 and Chapter 3*)
2. Medical imaging methods should be evaluated on their clinical viability using a proper external validation before usage. (*Chapter 4*)
3. Automated collateral scoring can be used to find the optimal CTA acquisition protocol in ischemic stroke patients. (*Chapter 5*)
4. What if the network for binary segmentation task does not performance well? Add a second one. (*Chapter 6*)
5. Deep reinforcement learning proximal policy optimization methods can be used in cerebral anterior vessel tracking task to tackle the more distally located vessels. (*Chapter 7*)
6. Stroke is an acute event caused by a chronic disease. While most of research is currently focused on the optimal treatment of the acute event, more attention should also be given to long-term disease management to prevent such event.
7. With the rapid advancement of AI and sequencing methods, there is potential to integrate data from diverse sources, even in the presence of population biases, enabling a more accurate representation of the underlying population.
8. Preventive care is important towards establishing a sustainable healthcare system.
9. Science has no national border, neither should scientific publishing.
10. Making the right choice is more important than the amount of effort invested to do things right.
11. There is nothing that a cat cannot solve. If there is, get a second cat.