

Project ideas

General information

Groups of 2-3 people

Report: 10 pages

Presentation: 20min + questions

Projects

1. Morphology classification based on algebraic topology

1.1 Supervised classification

1.2 Unsupervised classification

Paper: <https://link.springer.com/article/10.1007/s12021-017-9341-1>

Code: <https://github.com/BlueBrain/TMD>

2. Automatic generation of neurons and validation of the results

Paper: <https://www.sciencedirect.com/science/article/pii/S2211124722003308>

Code: <https://github.com/BlueBrain/NeuroTS>

3. Computation of memory capacity for different cell types

Paper: <https://www.sciencedirect.com/science/article/pii/S0896627301002525>

4. Create a neural network from a neuronal morphology

Paper: <https://www.sciencedirect.com/science/article/pii/S0896627321007170>

Code: <https://github.com/babicknell/Dendrites>