Pattern Recognition Lab

FRIEDRICH-ALEXANDER UNIVERSITÄT ERLANGEN-NÜRNBERG
FACULTY OF ENGINEERING

Dissecting Glaciers

- Can an Automated Bio-Medical Image Segmentation Tool also Segment Glaciers?

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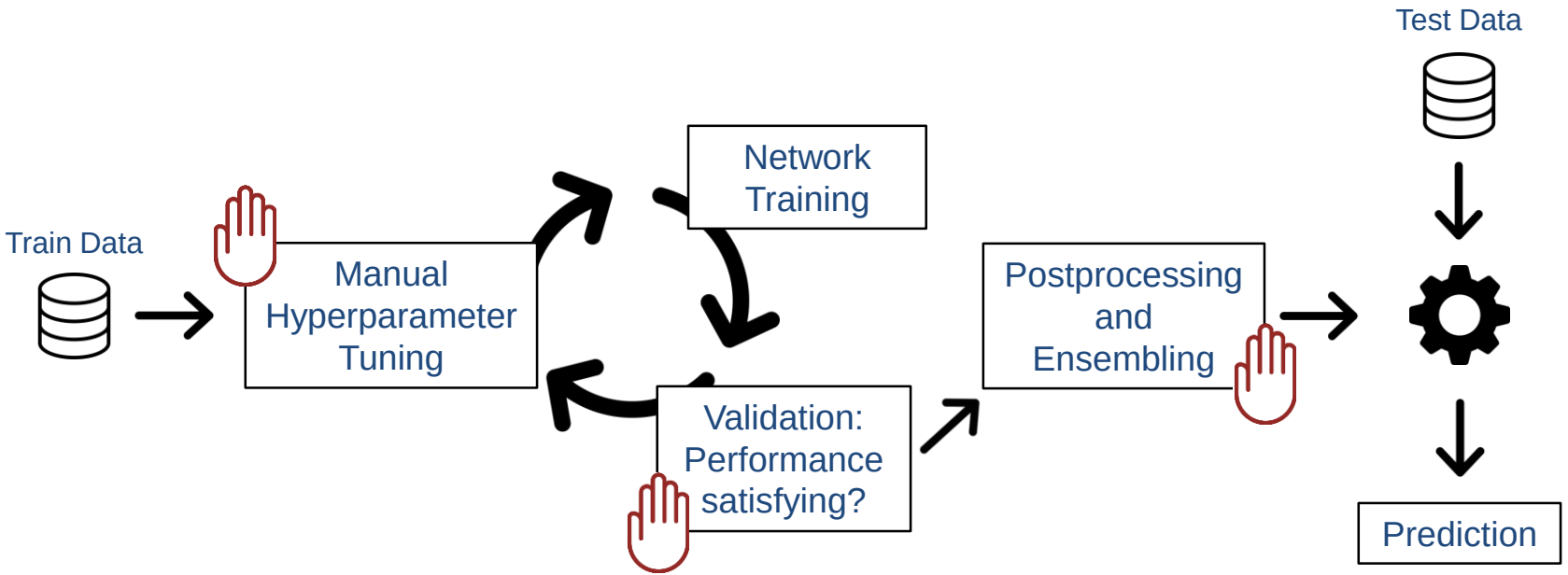
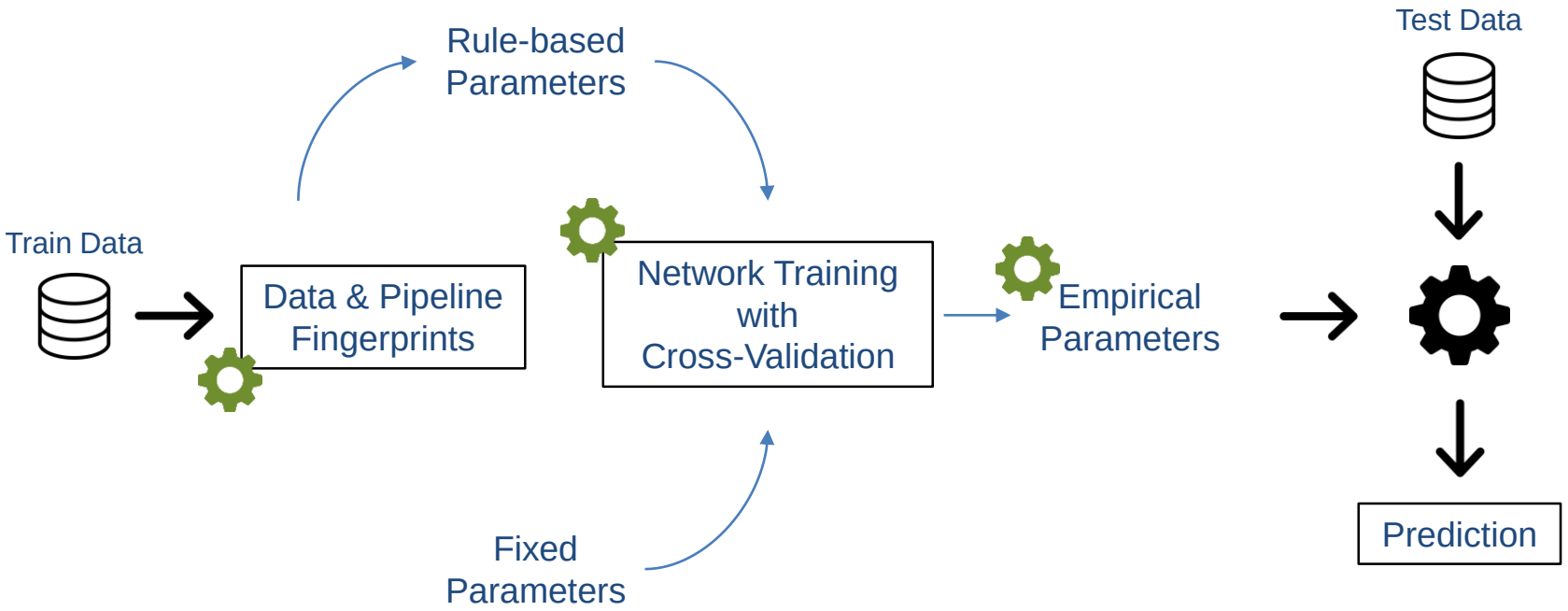
Current Deep Learning Practice



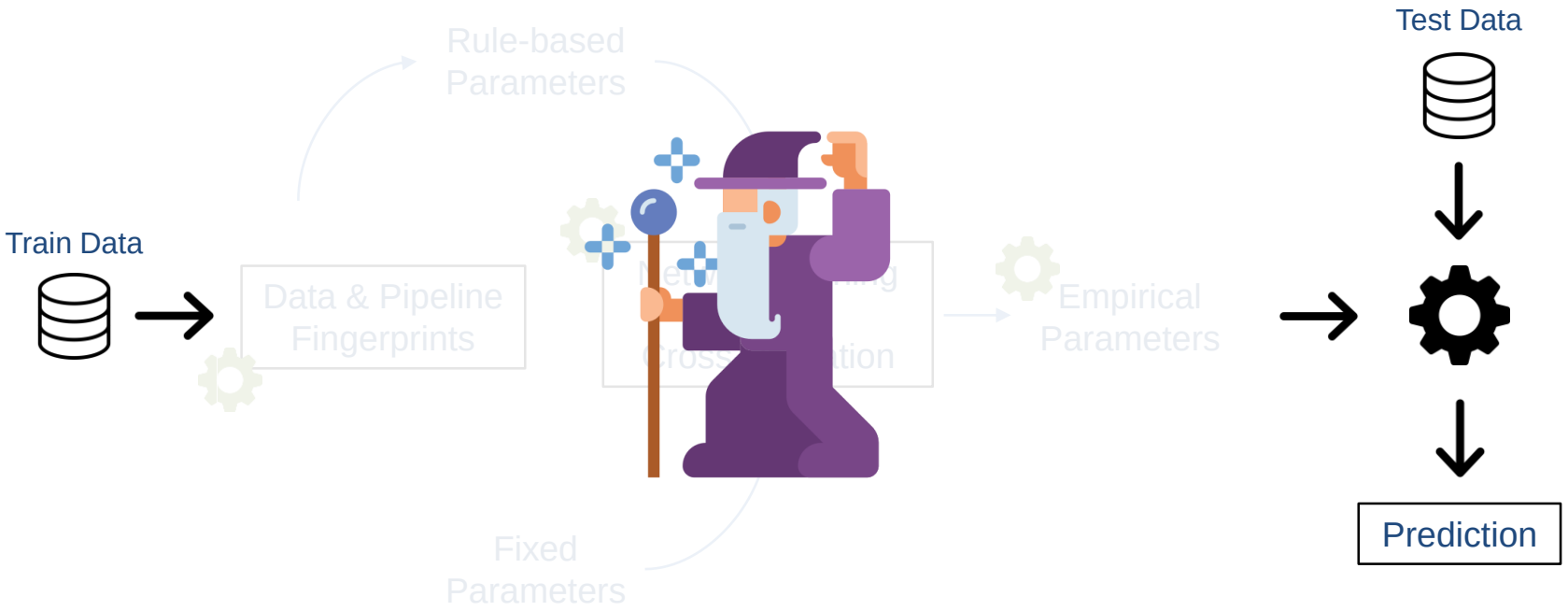
This image has been designed using resources from Flaticon.com and is adapted from [1].

nnU-Net



This image has been designed using resources from Flaticon.com and is adapted from [1].

nnU-Net



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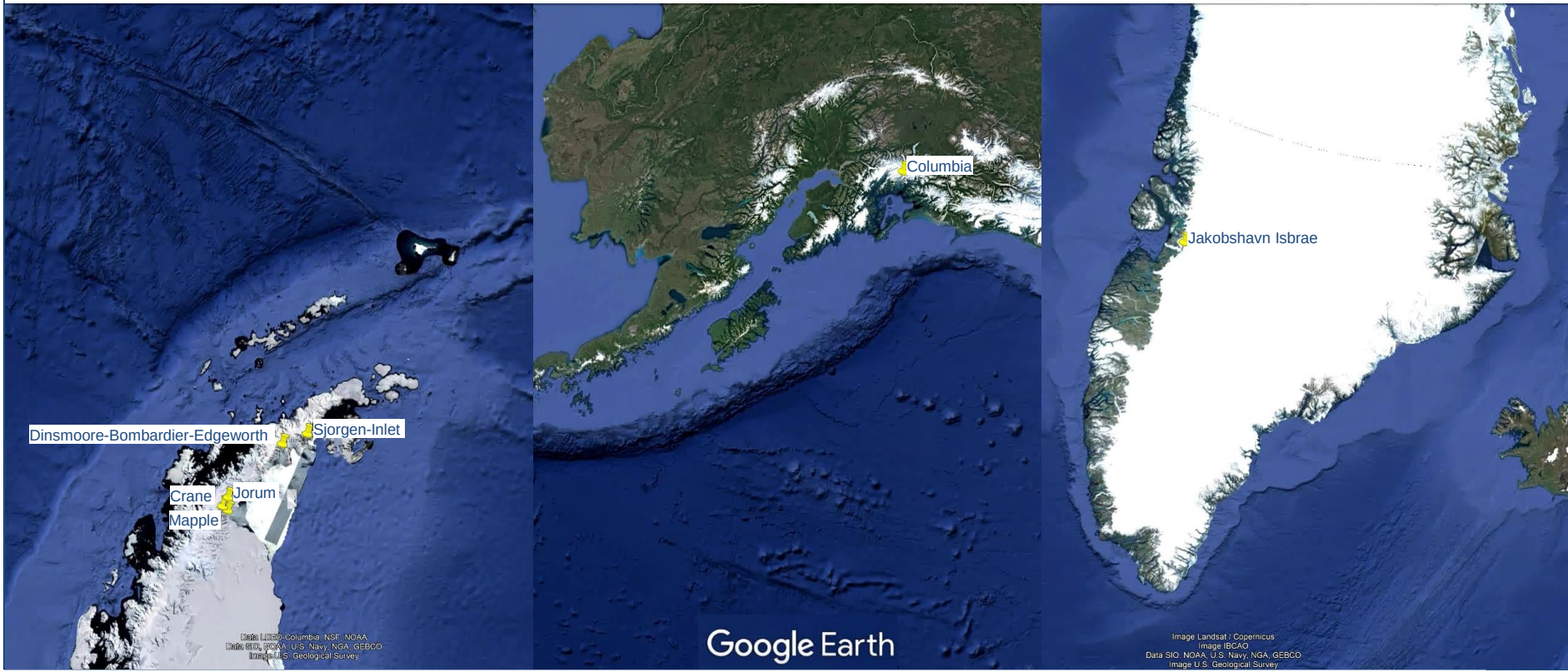
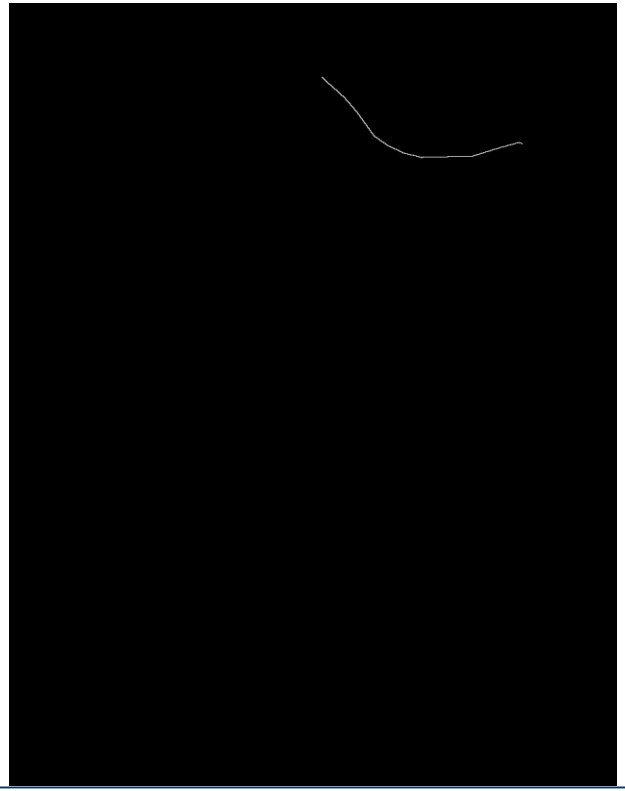
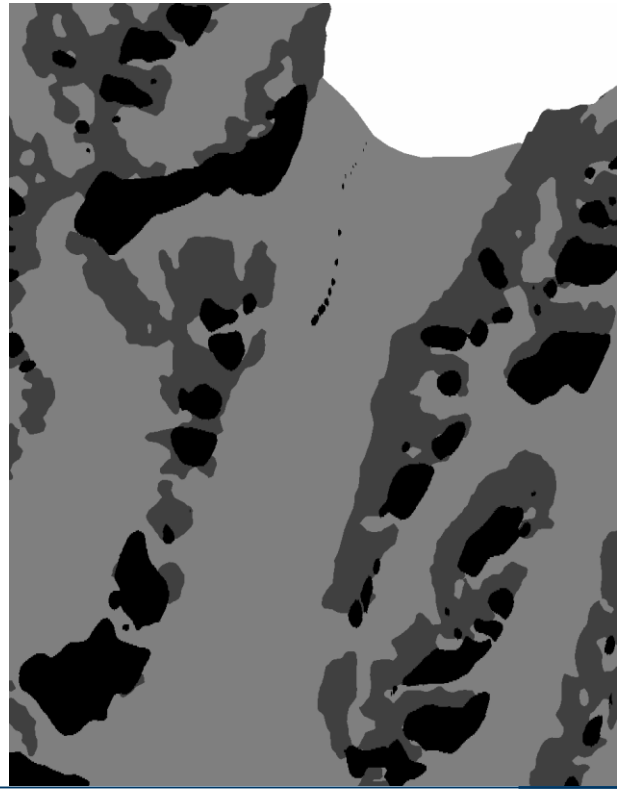
CaFFe Dataset [2]



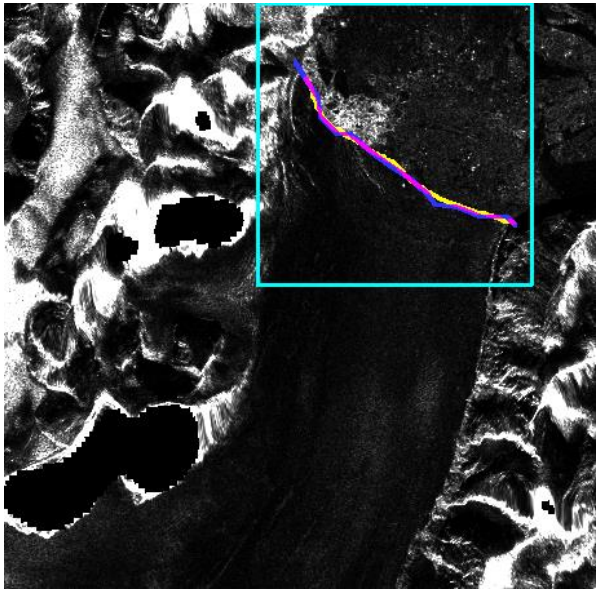
CaFFe Dataset [2]



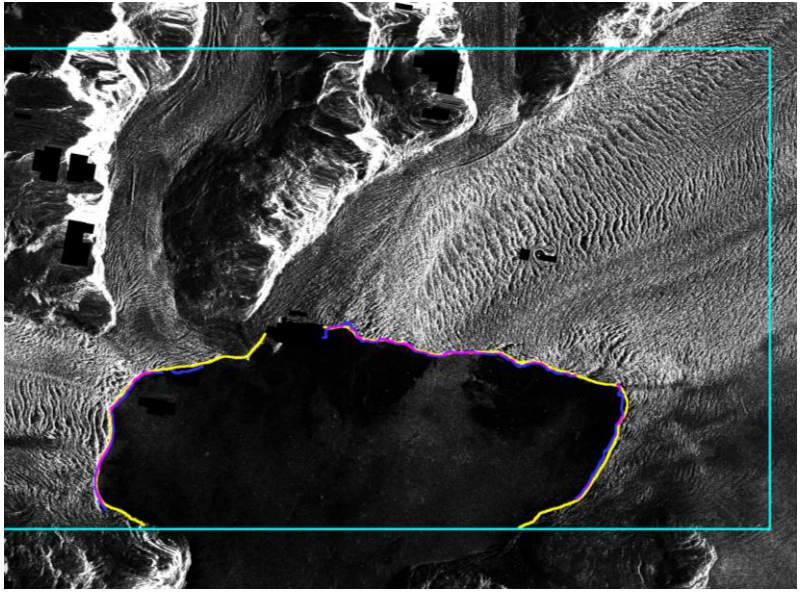


Results - *Mean Distance Error*

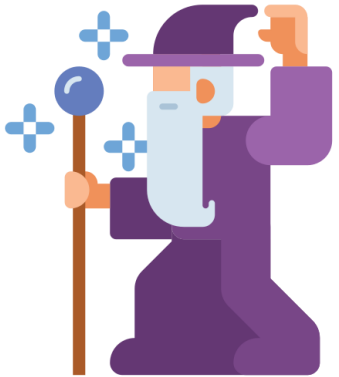
Mapple: 125 m



Columbia: 635 m



Thank you for your attention!



References

[1] F. Isensee, P. F. Jaeger, S. A. A. Kohl, J. Petersen, and K. H. Maier-Hein, “nnU-Net: a self-configuring method for deep learning-based biomedical image segmentation,” *Nature methods*, vol. 18, no. 2, pp. 203–211, 2021, doi: 10.1038/s41592-020-01008-z.

[2] Gourmelon, Nora; Seehaus, Thorsten; Braun, Matthias Holger; Maier, Andreas; Christlein, Vincent (2022): CaFFe (CAlving Fronts and where to Find thEm: a benchmark dataset and methodology for automatic glacier calving front extraction from sar imagery). PANGAEA, https://doi.pangaea.de/10.1594/PANGAEA.940950 (dataset in review)