



Implicit Neural Field

(An example of multi layer perceptron)

Neural network as function estimation

□ ... we can describe any 1D function to arbitrary accuracy

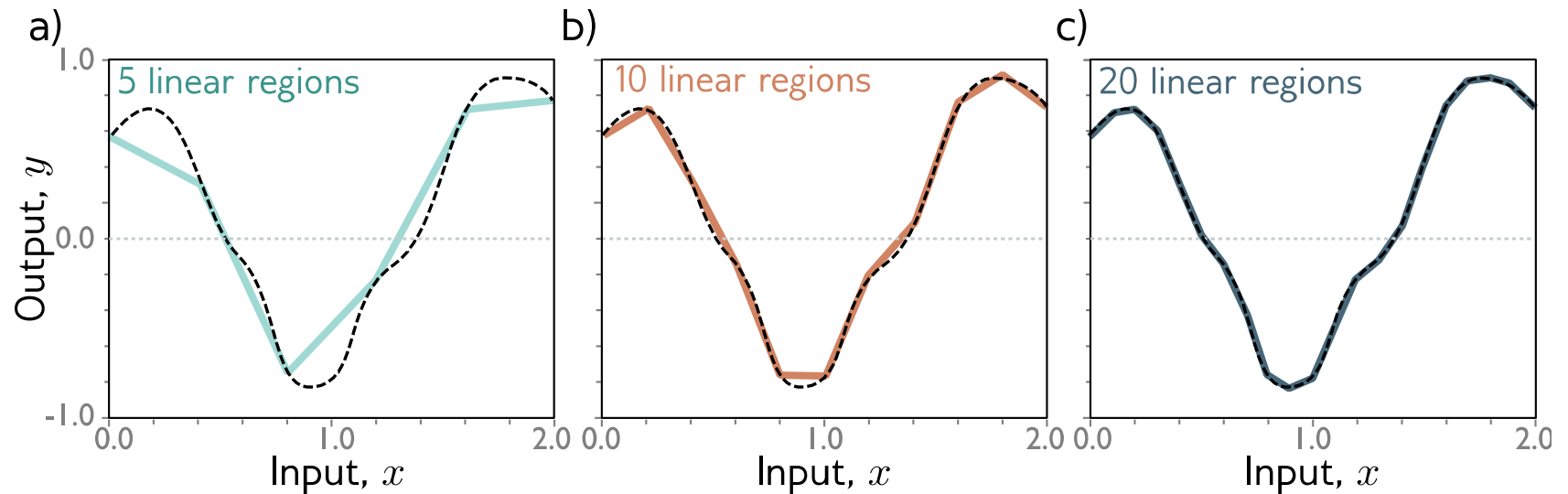
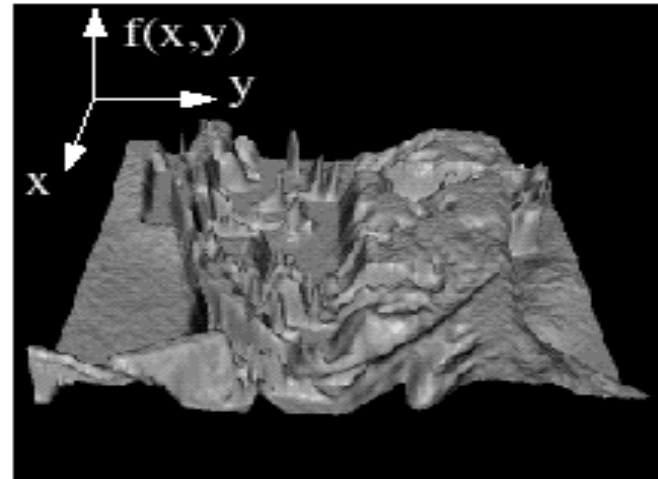
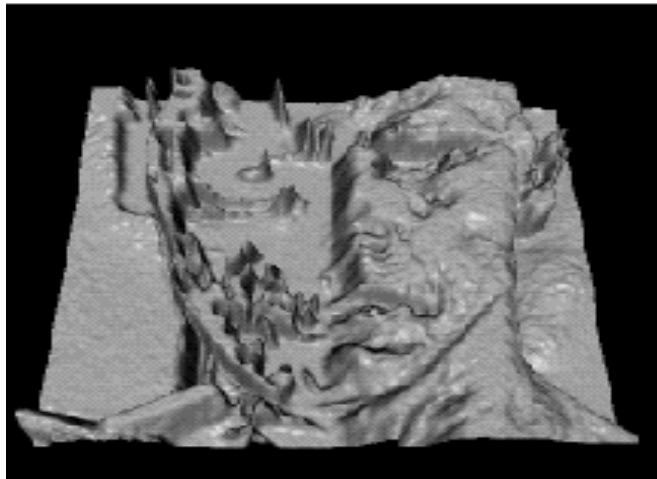
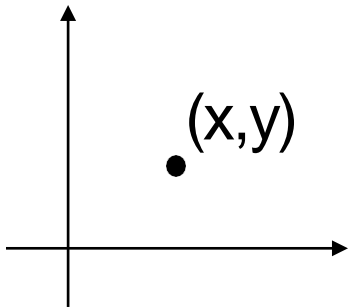


Image as function

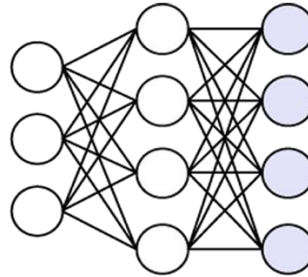
$$f(x, y) : \mathcal{R}^2 \rightarrow \mathcal{R}$$



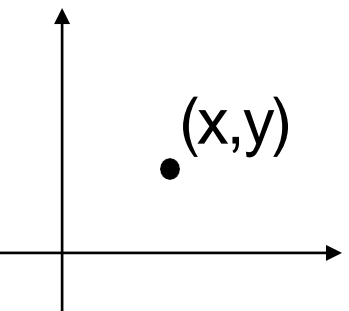
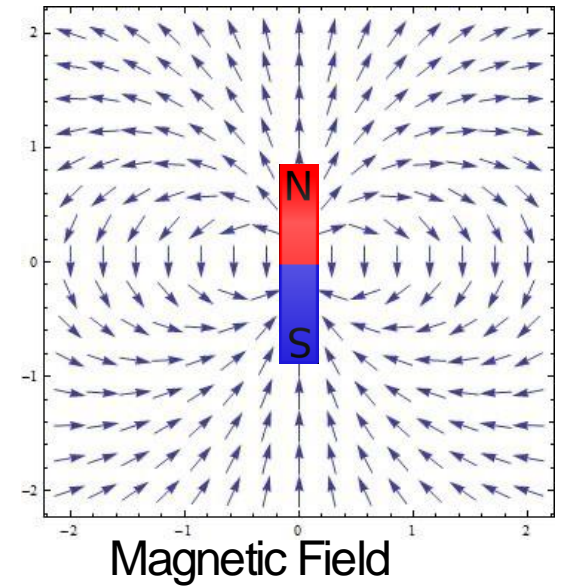
What are neural fields?



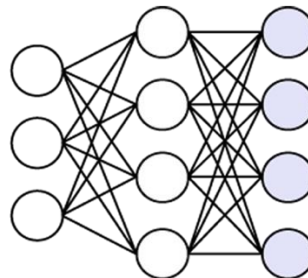
$$\Phi : \mathbb{R}^2 \rightarrow \mathbb{R}^2$$



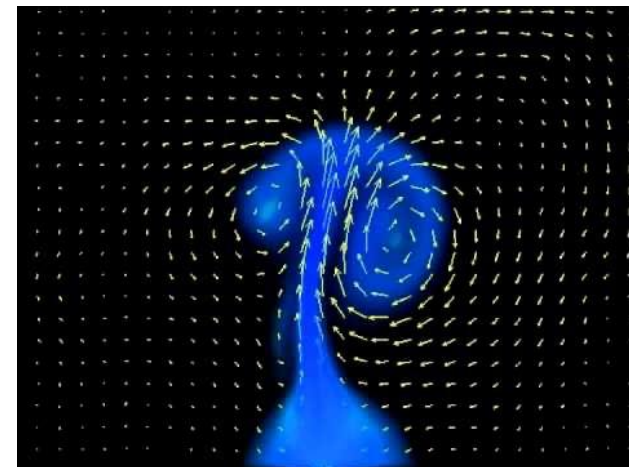
Neural Network (Φ)



$$\Phi : \mathbb{R}^2 \rightarrow \mathbb{R}^2$$

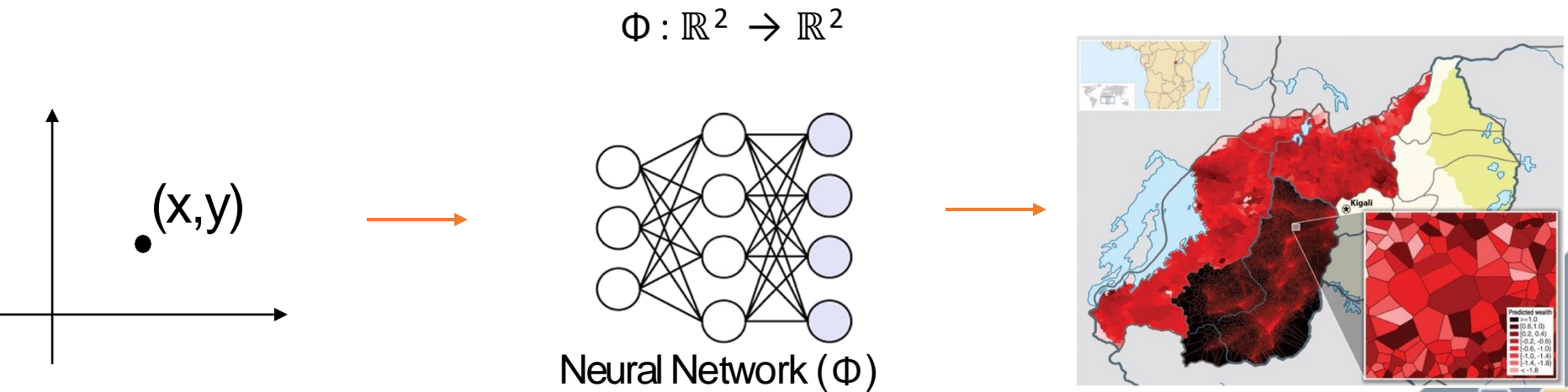
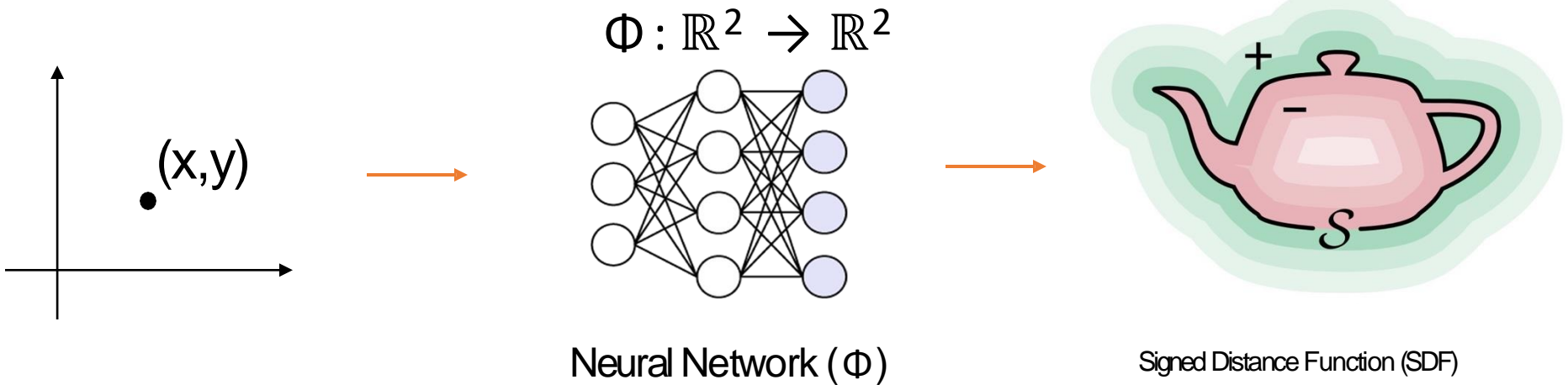


Neural Network (Φ)



Eulerian Flow Field of a Fluid

What are neural fields?



Geospatial Data
[Blumenstock et al. 2015]