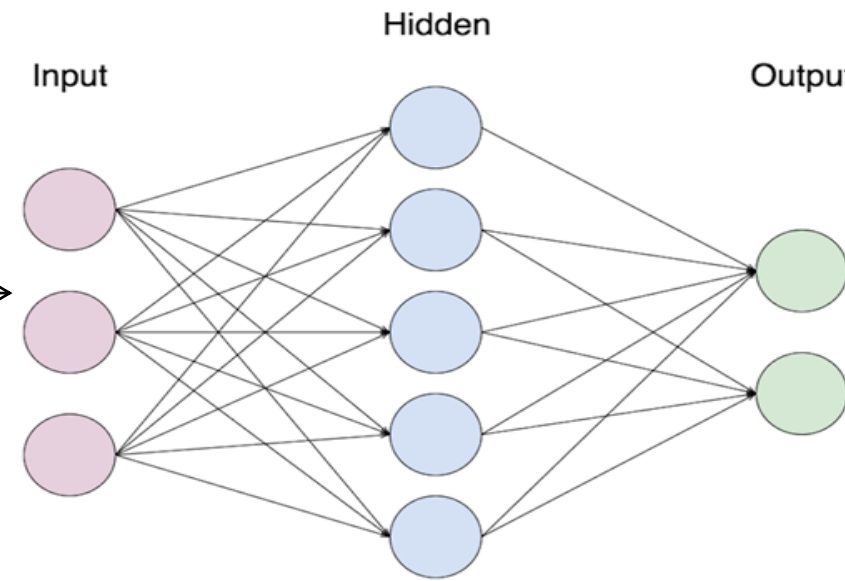


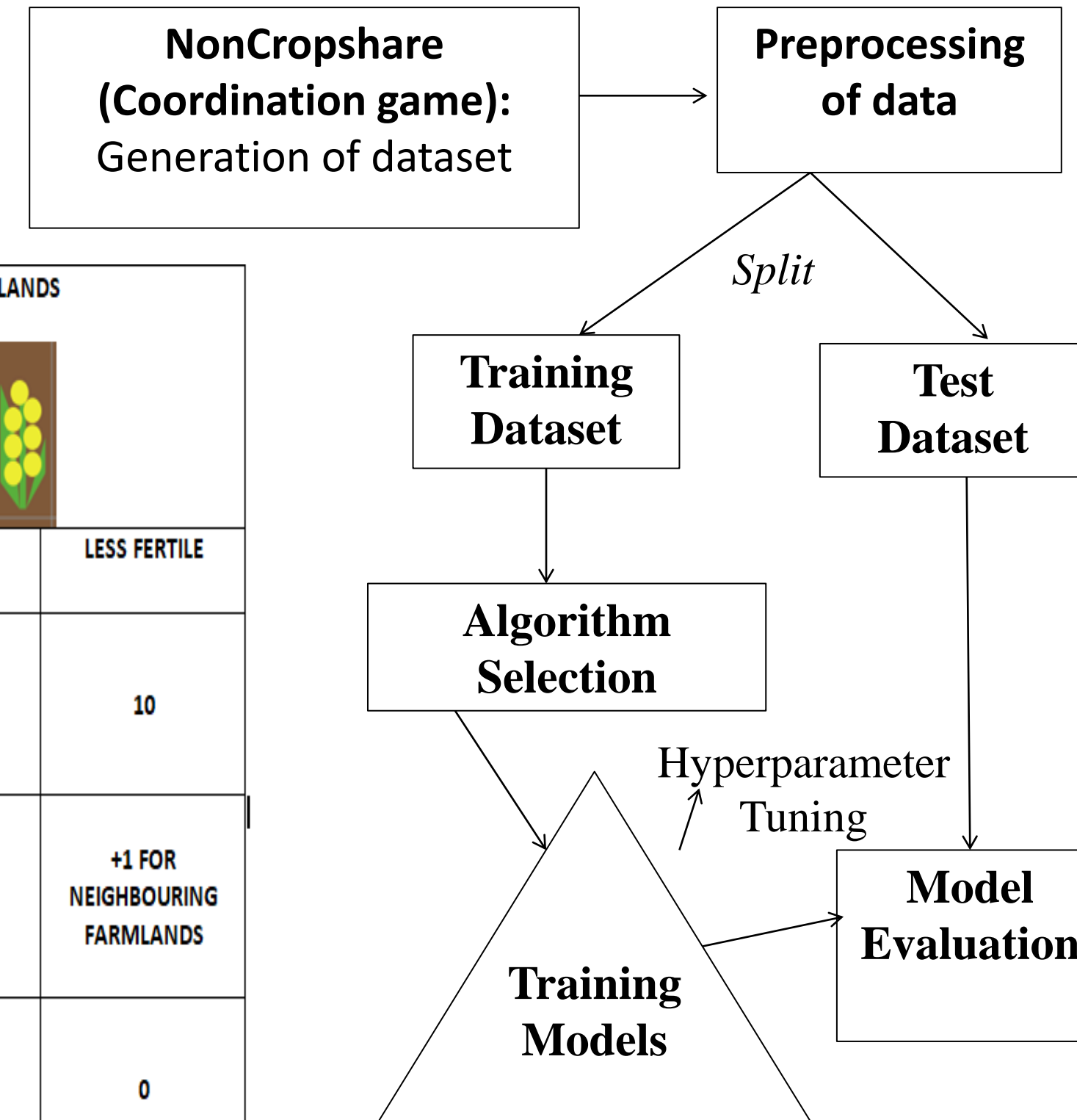


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MSc in Big Data

Neural network development for social-ecological modelling of conservation conflict



Data & Methodology:



Background & Motivation:

- Biological systems are critical to human prosperity. Unsettling influences in geo-biochemical cycles, the loss of biodiversity, and environmental change are possibly irreversible and present genuine dangers to humanity.
- One of the key reason for loss of biodiversity is the lack of good strategy for land-use decision making which means anthropogenically utilizing the land to convert natural landscapes like forests into agricultural production.
- The conservation conflict arises because multiple stakeholders have different interests, values in different political, historical and cultural settings and meeting the needs of each of them cause such kind of conflicts for instance, use of land for farming or fallowing for the purpose of this project.

Objective:

The aim of this project is:

- To implement an AI system (a Neural Network) that replicates the decision-making of a game player (i.e. a typical farmer).
- To use the AI system to simulate social-agricultural conditions and thus predict system dynamics i.e. how changes in incentives impact the land-use choices- whether to maintain non-crop habitat or employ pesticides shift.

	1. FOREST LANDS / FALLOW LANDS	2. FARMLANDS	
		MORE FERTILE	LESS FERTILE
YIELD	0	12	10
ECOSYSTEM SERVICES	-	+1 FOR NEIGHBOURING FARMLANDS	+1 FOR NEIGHBOURING FARMLANDS
SUBSIDIES	VARIES	0	0



Model Result:

