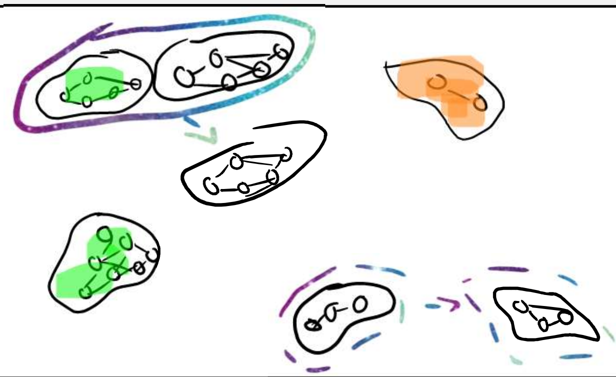
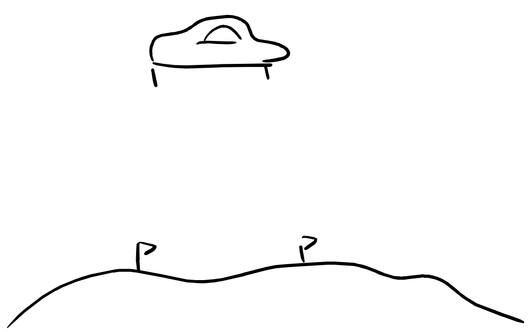
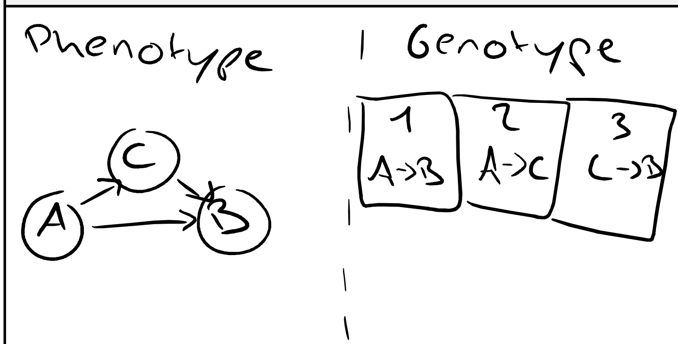
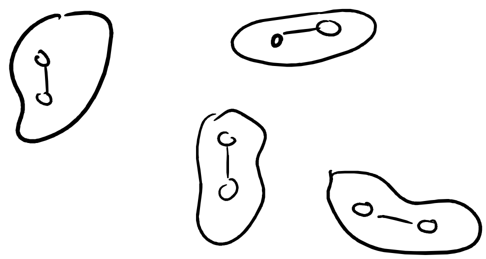
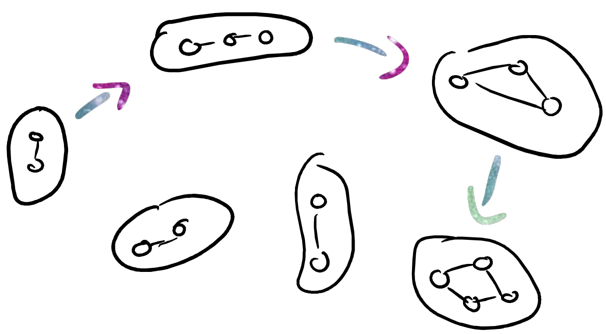
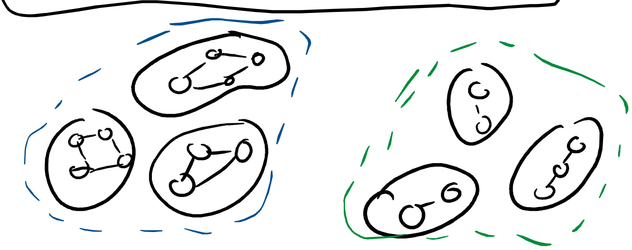
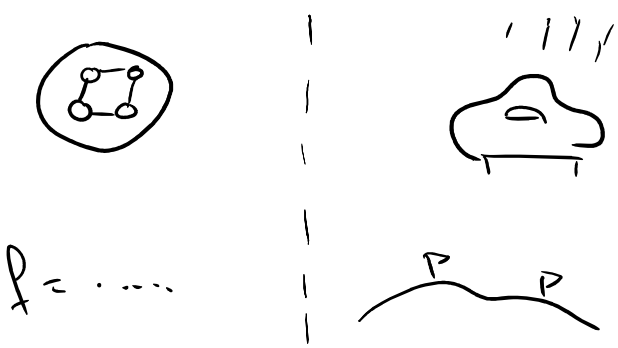
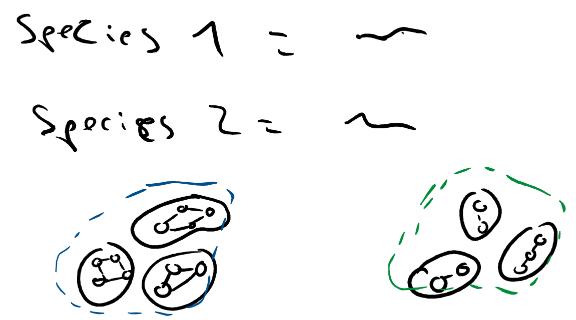
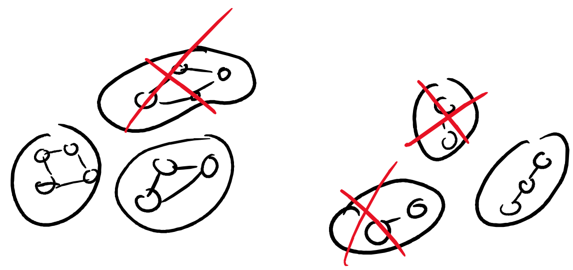
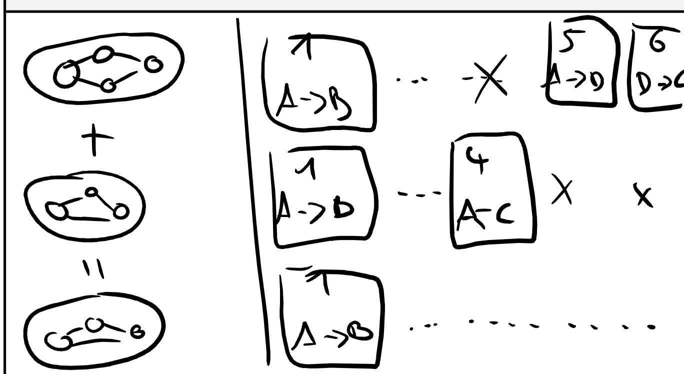
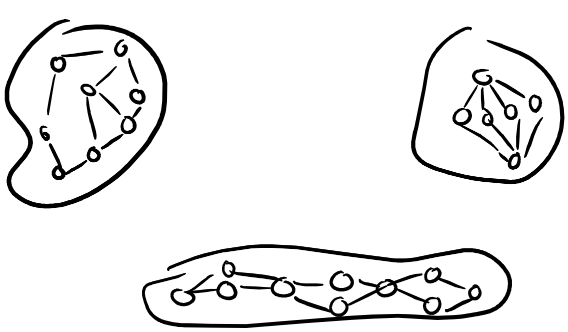
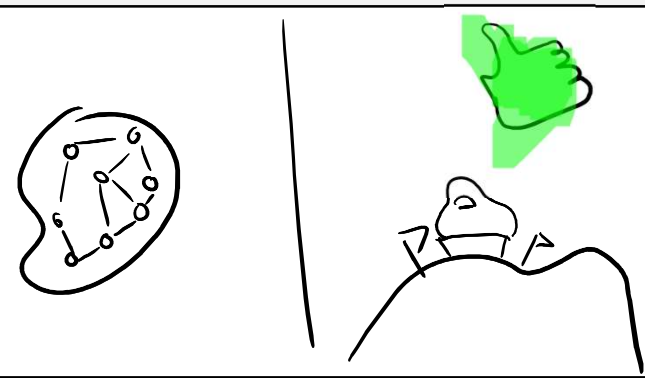
Cold Opener	
	Fast forward over the entire simulation, from the initial population to the final selection of the fittest individual in order to grab the viewers attention and generate interest. Depiction of the different neural nets as single-celled organisms swimming around randomly. Animation of a cell mutating. Animation of a cross-over between to cells. Show the forming of different species. Display the fitness of cells via color coding. Let all unfit individuals go extinct until only the fittest cell remains.
Title	
NEAT NeuroEvolution of AugmentingTop...	Explain that the process shown in the cold opener can be implemented using the NEAT algorithm
What to expect from the video	
	The viewer is told what to expect from the video. The goal is to train a neural net to play lunar lander. Instead of using hyperparameter tuning and backpropagation the best model architecture will be determined using NEAT. The whole process and all relevant mechanisms will be explained.
One Individual	
	Zoom in on one cell (i.e. one neural net). Explain the number of input and output neurons and how this relates to the game lunar lander. Explain the difference between phenotype and genotype. Explain that the fitness is determined by how good the NN is at playing lunar lander.

The initial Population	
	Zoom out and show an initial population of NNs, all having a simple structure without hidden layers. Explain that the weights were initialized randomly.
Mutation	
	Explain the process of (weight-, connection- and node) mutation visually by letting some of the floating cells evolve. Show how this affects their genotype. Make sure that the mutations result in obvious changes to their phenotype, so that the viewer can easier understand the notion of different species branching off. This might require applying multiple mutations to the same cell. Explain at some point that this is uncommon but was done here for explanatory purposes.
Speciation	
$\boxed{\delta = \frac{c_1 E}{N} + \frac{c_2 D}{N} + c_3 \overline{W}}$ 	Explain how to calculate the distance measurement and cluster all cells that belong to the same species.
Evaluating Individual Fitness	
	Show for some sampled NNs how they play lunar lander currently. Explain how their fitness is calculated and color code the cells acordingly.

Evaluating Adjusted Fitness	
	Explain that there is a second measure of fitness that determines how many offsprings each species can produce. Explain that this was introduced to avoid one relatively well adapted species (local minima) to dominate all other species (which are potentially on their way to a lower minima). Maybe dont use the term "adjusted fitness" since it is needlessly confusing. Maybe change it to something like "offspring rate".
Elimination	
	Show that the cells with the lowest fitness get eliminated.
Cross Over	
	Explain how to the cells that should cross over are chosen. Explain how the genom of the offspring is computed.
Multiple Iterations	
	Repeat the process by mutating again. Fast forward and show how different species form, how they exhibit different strategies at playing lunar lander and how some might be more successful than others. Show how the general performance improves with each iteration.

Identify Best Fit	
	Explain when the iterative process stops. Identify the best fit NN. Show how it plays the game.
Thanks for watching	
	The end