Urban Ecology: An Educational Game

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The purpose of our project was to design an educational game about animals adapting to an urban environment. It is meant to be used as a tool in elementary schools. The urbanizing modern world makes knowledge of city wildlife increasingly important. The game bases on an imaginary city. The player chooses a species from six offered alternatives. The player observes a simulation that begins with a small population of the player's species at the border of the city. This will demonstrate and clarify which species are capable of prospering in an urban environment. A teacher is required to further explain the hows and whys of the different outcomes of the simulation. The simulation model behind the game mechanics is simple, but it can produce data on the significance of certain parameters. For example, by slightly altering the pack size of the species we made a surprisingly big difference in the fitness of the species. No results derived from our model contradicted with current studies on animal behaviour in an urban environment. Our observations included things such as the effect of ecological corridors. Python programming language version 2.7 and PyGame library were used for the implementation. The final version of the game is usable, suitable for the target audience and offers a pleasant gaming experience. Our program could be developed further. Interactions with humans could be modelled more realistically. Added game features, such as points and high scores, could make the game more immersing for players.

Awards Won: