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AI Puzzle GDD

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Plan:

General

* Elevator Pitch
* Project Description
* Target audience
* Platform
* Monetization

Levels

Mechanics

* Level Progression
* Scoring System
* Behaviour Tree
* Controls

UI

* Menus
* Level Layout

Art/Music

* General Theme
* Art Theme
* Music Theme
* Sound Effects
* Examples of Theme in action

# General

## Elevator Pitch

A puzzle solving game where instead of solving the puzzles directly you create an AI to solve them for you.

## Project Description

This game is all about creating AI through behaviour tress in order to solve puzzles. For each level the player will be given a blank canvas for which to create a visual representation of a behaviour tree, which will then be executed. If the puzzle is successfully completed, the player will be given a score depending on a few factors, such as how quickly the AI was able to complete the puzzle, and how big the behaviour tree was. There will be different themes of puzzles, each with a very different type of puzzle to solve, containing a number of levels varying in difficulty.

## Target Audience

The game is targeting adults and older teenagers who have an interest in technology and AI in general. The main goal is to create an interesting introduction to AI creation and behaviour trees.

## Monetization

Currently monetization is not being looked at as the game will be releasing on Itch.io mainly.

# Puzzles

## Puzzle 1

These groups of levels are the introduction, and will consist of turtle AI puzzles. These are simple to complete, and will introduce basic functions such as interacting with the objects on screen within the behaviour tree. These puzzles will introduce functions such as moving forward, turning, and basic AI loops.

## Puzzle 2

These will still be easy puzzles but will introduce more complicated loops with selector and sequence nodes. These puzzles will take the form of something I haven’t thought up yet…

# Mechanics

## Level Progression

While each level will have a rating, these ratings will not be necessary to progress to the next theme. For example, the player could get 1 star on every level within the theme, but as long as they are completed that will be all that matters and the player will be able to move to the next theme.

## Scoring System

The scoring system is based off of 2 distinct values; how long the AI took to complete the objective and how large the tree was. The more nodes used to complete the objective, the lower the score. Time will not be necessarily judged by how long the AI takes, but will instead be judged by how many times a node is called. For example, a single node looping 100 times will only count 1 to the size score, but will count 100 to the time score. This eliminates any need for