**Creation of a data-driven algorithm for use in content creation**

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**Abstract (0/200)**

* 1. **Introduction (0/2200)**

As the gaming industry continues to expand any content that hopes to engage a wide audience must be able to accommodate for the varied preferences. However, designing and creating individualised game content would take up too much time and resources. Instead there has been a rising interest in automatic generation of game content to assist with producing

* 1. **Background**

**1.2.A Procedural Generation**

**1.2.B Player Behaviour**

**1.2C Content Analysis**

**1.2.D Evolutionary Algorithm**

* 1. **Context**

**1.4 Research**

**2 Development and Implementation (0/2200)**

**2.1 Gameplay**

**2.2 Track Representation (Paths, Points)**

The representation of game content is a central question when it comes to evolutionary computation (Togelius, 2010). For this project I decided to use Search-Based Procedural Content Generation (SBPCG), which is a type of procedural generation that tests the generated content on its fitness based on set parameters. This is used in conjunction with an evolutionary algorithm that changes what the parameters can be. When using SBPCG the representation of the content is very important as it determines how the algorithm analyses the content. For example, the tracks made in this game could be represented in these different ways:

1. An array of points – Saving the position and order of each point in the track.
2. A list of pairs of points, including the distance between them
3. A list of segments, each segment comprises of three points as well as their distances and the angles between them.

**2.3 Track Generation**

**2.4 Player Tracking**

**2.5 Ratings**

**2.6 Track Evolution**

**2.7 Track Selection**

**3 Self-Assessment of Learning (0/400)**

**4. References**

**4.1 Procedural Generation**

Togelius, J. Yannakakis, G. Stanley, K and Browne, C., 2010. Search-Based Procedural Content Generation. Applications of Evolutionary Computation [online], 1, 141-150

**4.2 Player Behaviour**

**4.3 Content Analysis**

**4.4 Evolutionary Algorithm**

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