

# Clustering and Finite State Machines for Adaptive Level Generation in Games

Jorge Diz Pico (jorge.diz@estudiante.uam.es), David Camacho (david.camacho@uam.es)

**Abstract**—Content generation has been widely used in gaming to offer virtually infinite replayability. Its combination with adaptive techniques also provides a tighter fit between results and gameplay. We propose a new approach for procedural level generation based on a combination of clustering and finite state machines. The method has been designed and deployed as an entry for the Level Generation track of the Mario AI Championship. We'll show that the implementing architecture provides great flexibility for both refinement and extension to other games, and the experimental results confirm the validity of this approach.

## I. INTRODUCTION

I have such a deep knowledge of what's been made before!

## II. METHODOLOGY

I methoded the shit out of this!

### *Clustering*

I love weka so much!

### *Finite State Machines*

I named my cat Turing!

## III. RESULTS

I got so many interesting things out of this!

## IV. CONCLUSIONS

This is great work and I rock!

### *Future work*

There's so many ways to build upon this!

## ACKNOWLEDGMENTS

I am so thankful! The authors would like to thank Mr. XYZ for his/her help. This work was supported in part by the National Science Foundation under grant no. XXXXX, etc.