



# BrainZ & GainZ

Brian Catudan • Collin Sorkin • Albert Wohletz  
 Instructor: Dr. Sergiu Dascalu • External Advisor: Dr. Sushil Louis  
 Department of Computer Science and Engineering, University of Nevada, Reno  
 CS 426: Senior Projects, 2014



## Abstract

BrainZ & GainZ is a free to play mobile survival game using the Unity 3D engine. BrainZ & GainZ is based on a real world city that reflects an apocalyptic time. The purpose of BrainZ & GainZ is to introduce mobile gaming to a wider range of people by using the familiarity of levels to gain their interest. BrainZ & GainZ is available for download through the Android Google Play Store.

## Architecture

The architecture of BrainZ and GainZ utilizes 5 main controllers: GUI, controller, player controller, spawn controller, environment controller, and game controller. These 5 controllers and their various subsystems depicted in Figure 2 interact with the Unity3D game engine to create a game. "Life" is given to the various game objects through various means: C# scripts, JavaScript, animations, lights, particle effects, and many other methods.

## Conclusion

Mobile gaming is growing quickly in today's market. The countless games on the mobile market reflect that change. BrainZ and GainZ integrated the most popular aspects of mobile gaming: free to play, easy to understand, and fun to play. BrainZ and GainZ hoped to reach out to an even bigger audience by having its levels based on real world cities. BrainZ and GainZ is going feature more cities through downloadable content.



Fig.1 Gameplay screenshot



Fig.2 Upgrade menu



Enemies

Power-ups

Weapons

Fig.3 Various game objects in BrainZ & GainZ

## Description

The main goals for BrainZ & GainZ was to develop a free easy to play mobile game that was portable to the Android operating system. BrainZ & GainZ is meant to introduce mobile gaming to a wider audience by using real world locations that users have visited to entice them to play. An intuitive heads up display (HUD) allows BrainZ & GainZ to be an easy to play game. Dynamic spawning of enemies, weapons, and collectables allows BrainZ & GainZ to make every play-through unique. BrainZ & GainZ includes multiple types of enemy AI such as wandering, chasing, and shooting.

## Future Work

- BrainZ and GainZ shall be available on the Apple App Store and console devices.
- BrainZ and GainZ shall release updated downloadable content.
- BrainZ and GainZ shall contain account creation and friend system.
- BrainZ & GainZ shall support replay saves.
- BrainZ & GainZ shall support free weekly levels.