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Why there has been a decline in racing games especially arcade racing games?

GDEV60001 Games development project

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# Abstract

# Introduction

Vehicle Physics have always been a core part of racing games. It can either make or break the game. While sim racing has set major strides in their physics, same can be said for arcade racers but not in a good way.

Even though physics system is hard, developers have to take other things into account such as handling, collisions, suspensions, gravity, downforce, braking, damage models, stabilization and many more. In most of the modern arcade racers nowadays from indie to AAA, they all suffer a major issues. Hotshot Racing has loose suspension, Dirt 5 vehicles are too light with weightless handling and clunky collisions.

While some games have made improvement from predecessors, some games still have glaring issues. Need for Speed Unbound has jelly suspensions, slow drifting and very sensitive crash detection. Grid Legends have weird collisions, curbs that could spun the car out and drifting that has maximum grip. The only modern racing game with a decent physics system is Forza Horizon 5. The community which prefers racing games with best vehicle handlings are more than 10 years old. Because they showcase actual weight distribution, proper suspension and fun crash physics.

They are not perfect but anyone can tell that these developers were passionate about racing genre and how the cars felt. Their gameplay makes up the most of the vehicle physics like Burnout or older Need for Speed titles.

The companies nowadays have this weird obsession of rewriting their physics engine. Obviously, if the physics aren’t great changes are needed, but that doesn’t mean reinventing the wheel. EA Blackbox had a good physics engine for NFS The Run and yet Ghost Games did not used it for their own NFS game.

This decline not only affects the gaming industry but also diminishes the rich cultural facet of racing entertainment.

In response, this dissertation presents a novel racing physics system developed entirely from scratch within Unreal Engine. The artefact is designed to served dual purposes:

* **Reviving the arcade racing genre:** By laying the groundworks of not reinventing the wheel, this artefact/tool aims to reignite the interest in racing games. With enhanced simulation fidelity and memory efficiency a new foundation for game developers who share similar passion for racing. (primary objective)
* **Prototyping for Automotive companies:** This tool offers a practical application for the automotive industry by bridging the gap between digital simulation and physical production. Car companies can utilize this engine to visualize and analyse the performance of their vehicle models during the prototyping phase.

# Aims and Objectives

The purpose of this study is to make

# Literature Review

# Research Methodologies

# Results and Findings

# Discussion and Analysis

# Conclusion

# Recommendations

# References

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Do not put results here: only the raw data should be presented in an appendix. Other materials that may be included in an appendix includes, for example, blank questionnaires, copy of written tests used.

Remember do not include anything in an appendix that has not been referred to in the text.

## Appendix 1 – xxx