A blue and white logo

AI-generated content may be incorrect.

National College of Ireland

Project Proposal

< Title>

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Computing

Software Development

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# Objectives

The project aims to design and implement a prototype motorsport management simulator that captures the scale, depth, and unpredictability of real-world racing ecosystems. Unlike existing titles, which currently focus on a limited range of disciplines (e.g., Formula 1 and limited feeder systems), the project will model a wide variety of racing disciplines, each with its own unique challenges and culture. For example, rally racing will feature dynamic terrain and weather, requiring teams to adapt strategies for gravel, tarmac, or snow. Endurance racing will simulate human factors such as driver fatigue, teamwork, and mechanical reliability over long events. Street racing will emphasise customisation, driver personality, and the underground culture that shapes rivalries and alliances. By capturing these distinctions, the simulator will aim to represent a more varied and context-sensitive motorsport environment, where each series presents different management challenges.

The objective is to simulate a persistent game world where events unfold across all leagues, regardless of whether the player is directly involved. By doing so, the system mirrors the emergent qualities of Football Manager, supporting diverse career trajectories that may differ across playthroughs.

A further objective is to offer a high degree of customisation. Players will be able to modify or generate new teams, drivers, and competitions. Procedural generation will be a cornerstone, enabling large-scale fictional ecosystems that feel authentic while avoiding licensing restrictions.

The project will demonstrate implementation across key areas including simulation design and AI-driven decision-making. The intended prototype will model core systems such as driver progression, financial management, league standings, and race outcomes, with a focus on achieving computational efficiency.

Ultimately, the project’s objective is to produce a management simulator that can serve as a foundation for future extension. It seeks to address an identified gap in current games by emphasising simulation depth and customisation, rather than prioritising graphical fidelity.

# Background

My passion for motorsport spans a wide range of disciplines, from open-wheel racing to rally, endurance, and street racing. While some recent games, such as The Crew Motorfest, successfully capture the unique feel and culture of different racing series, they focus on driving experiences rather than management. Existing management games, on the other hand, tend to concentrate on a single discipline or lack the depth and variety needed to authentically represent the full spectrum of motorsport. No current title combines the breadth of racing types, the distinctiveness of each discipline, and the emergent, persistent world of a management simulation. This project seeks to address that gap by integrating the unique characteristics of multiple racing series into a single, dynamic management experience.

Having spent extensive hours in Football Manager, I have experienced the appeal of large, complex simulations that generate emergent stories. Despite having a stronger interest in Formula 1 and motorsport generally than in football, I find myself drawn more to Football Manager than to existing motorsport management titles. This reveals an important insight: the attraction lies not in the sport itself, but in the richness of the simulated world.

By comparison, current motorsport titles such as F1 Manager and Motorsport Manager are limited. Their focus is largely on presentation and visuals rather than world depth. The lack of customisation and the narrow scope of simulated leagues lead to repetitive experiences over time.

This project seeks to address this gap by exploring how the thematic appeal of motorsport can be combined with the systemic depth characteristic of Football Manager. The objectives outlined in Section 1.0 will be met by designing algorithms that support persistent multi-league simulation, driver development models, and financial/strategic systems. Procedural content generation will be used to overcome licensing limitations and create a fictional but believable motorsport ecosystem.

# State of the Art

Current motorsport management titles include Motorsport Manager (2016) and F1 Manager (2022–2024). These games present detailed races and authentic visuals, but their simulation depth is fundamentally limited. Driver development is linear and largely predetermined, making long-term play predictable. Once a player has learned the optimal strategies, the outcomes become repetitive. In contrast, Football Manager maintains replayability by simulating an immense global ecosystem of leagues, players, and staff, where no two careers are the same. This difference highlights the gap between motorsport management games and the broader standard of emergent sports simulations.

Another limitation of existing motorsport titles is their lack of customisation. Players cannot easily expand leagues, create fictional scenarios, or reshape the competitive environment. The games are tightly constrained by licensing agreements and static structures, which prevents the freedom that makes Football Manager engaging. Furthermore, the game worlds are small in scale, restricted to a handful of categories such as Formula 1 or Formula 2, with little simulation occurring outside the top tiers. By comparison, Football Manager tracks hundreds of leagues and thousands of clubs across multiple nations, with events unfolding regardless of direct player involvement.

This project aims to distinguish itself by adopting that philosophy. The simulation will extend beyond open-wheel racing, with multiple tiers within each discipline. Every league will progress whether the player manages there or not, creating a sense of a living world. Because official licensing is not available, all teams, drivers, and championships will be procedurally created, which also allows experimentation with unique structures, rivalries, and narratives. By prioritising breadth, depth, customisation, and emergent systems, this project will investigate how principles seen in Football Manager’s large-scale simulation might be adapted to a motorsport context.

It is worth noting that some recent non-management racing games, such as The Crew Motorfest, have made significant strides in capturing the unique feel, culture, and challenges of different racing disciplines. These titles demonstrate that it is possible to authentically represent the diversity of motorsport, from rally to endurance to street racing. However, they focus on the driving experience and do not offer the persistent, emergent management simulation that is central to this project. No current management title integrates the breadth of racing types, the distinctiveness of each discipline, and a persistent simulation world. This project aims to explore how these elements can be combined within a prototype, developing a management simulator that reflects both the variety and complexity of motorsport ecosystems.

# Technical Approach

(Max 1 page)

What approach will you take to development? How will you identify requirements? How will you break down requirements into project tasks, activities and milestones?

# Technical Details

(Max 1 page)

Implementation language and principal libraries. What are the important algorithms or approaches under consideration for this work?

# Special Resources Required

(Max half page)

What special resources if any will be required for this work?

# Project Plan

(Max 2 pages)

Project plan with details on implementation steps and timelines. This project plan should provide as much detail as possible for now and will be revised with more detail with the mid point documentation.

# Testing

(Max 1 page)

Describe how you will evaluate the system with real technical data using system tests, integration tests etc. If applicable describe how you will evaluate the system with an **end user. (be careful here re Ethics etc)**