COMPLEX SYSTEMS IN THE COLOMBIAN FOOTBALL LEAGUE

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INTRODUCTION

This project focuses on analyzing the Colombian football league as a complex system. The goal is to thoroughly understand its dynamics, stability, and emergent behaviors. The insights gained from this analysis will later serve as the foundation for developing a chatbot capable of interacting with users based on the knowledge of this system. By dissecting the league's structure and functionality, we aim to improve predictive capabilities and interaction models for applications.
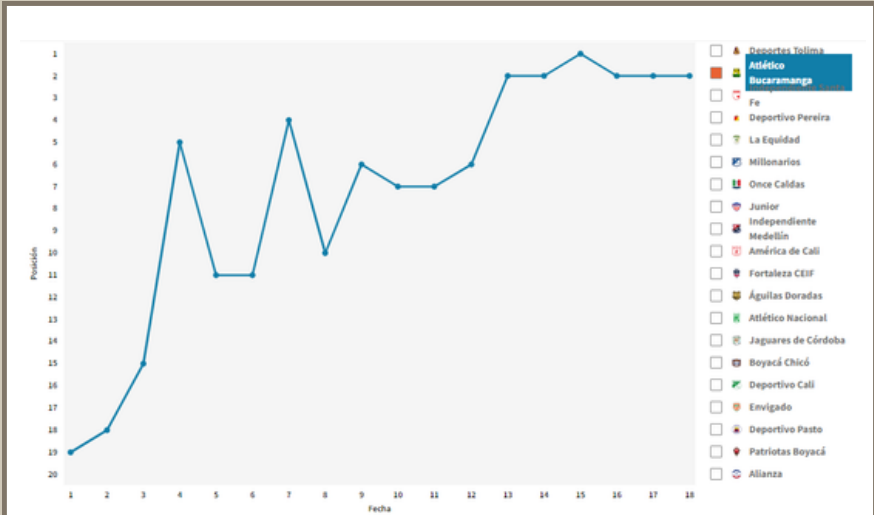

Figure 1. Individual performance of a soccer team as a system actor.

GOAL

¿How can the Colombian football league be modeled as a complex system to enable the creation of an chatbot that understands its dynamics?

Examining the system from each of its small parts, understanding that it is not only a set of soccer games, but also has a background where more actors such as the fans of each team are an active part of the system and achieve the survival of this.

After this analysis we will be able to obtain enough information to understand the Colombian soccer league as a complex system, giving way to be able to use this information to nurture our chatbot.

PROPOSED SOLUTION

The proposed approach involves breaking down the league into its key components and analyzing how they interact. We will apply concepts from systems theory—such as Chaos Theory and Synergy—to better understand the system's stability and the impact of small events on overall performance. This deep understanding will be used to inform the development of a chatbot capable of dynamically engaging with users about the league, simulating responses based on real system behavior.

CONCLUSION

Our research lays the groundwork for developing an intelligent chatbot that interacts with users about the Colombian football league. By dissecting the league as a complex system, we were able to capture its emergent behaviors and dynamic interactions. This detailed analysis will enable the chatbot to provide more accurate and meaningful responses, enhancing user experience and showcasing the applicability of systems theory in AI development.

VALORES DE MERCADO DE LA LIGA BETPLAY

Atlético Nacional	US$26,08 millones
Millonarios FC	US$25,55 millones
Junior de Barranquilla	US$25,45 millones
Independiente Medellín	US$18,77 millones
América de Cali	US$17,01 millones
Deportes Tolima	US$16,76 millones
Deportivo Cali	US$12,90 millones
Aguilas Doradas	US$12,66 millones

Figure 2. Market values of each equipment directly related to its monetary capacity.

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