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## Abstract

In an era of growing complexity and rapid technological transformation, foresight and strategic anticipation have become vital to organizational success. Foresight analysis—through scenario planning and trend monitoring—helps reduce future uncertainty and strengthens decision-making frameworks [1].

This paper presents a digital simulation model grounded in the principles of business wargaming. The system is designed as a foresight-based card game, enabling users to test decisions within evolving scenarios and evaluate long-term implications. Built with C# and the Unity game engine, and supported by pre-trained language models and a PostgreSQL database, the platform offers real-time data analysis and user interaction tracking.

Developed in collaboration with Turkish Aerospace Industries (TUSAŞ), this platform seeks to foster agility, proactive behavior, and futures thinking among decision-makers [2].

## Introduction

### A. Originality

As uncertainty becomes an increasingly dominant characteristic of the business environment, simulation-based models have gained prominence in supporting foresight and long-term planning [3]. Among these, business wargaming is particularly noteworthy for its interactivity and adaptability. Unlike conventional strategic tools, it allows participants to simulate real-world conditions and engage directly with hypothetical futures [4].

However, existing applications are largely confined to physical workshops, which limit accessibility and scalability [5]. This research addresses that gap by proposing a digitized wargaming solution that integrates artificial intelligence, enabling more dynamic and data-driven strategy development.

### C. Contributions of the Study

This study contributes to both theoretical and practical research by introducing a digital business wargame developed in Unity, filling the gap in existing digital foresight tools. By integrating artificial intelligence and data analytics, the platform offers a more adaptive and evidence-based planning environment. Unlike static models, it supports dynamic decision-making and enhances user engagement through gamification. Real-time data tracking via PostgreSQL and NLP allows for detailed analysis of decision behaviors. Overall, the system provides a flexible, scalable solution that can be applied across various industries to support strategic learning and future-oriented thinking.

### B. Aims and Objectives

This article aims to present a solution that enhances users' ability to make future-oriented predictions and supports their futures thinking skills. The foresight-based card game simulation introduced in this study, developed using the Unity game engine, offers a dynamic structure that enables users to adapt to emerging technological trends and make forward-looking decisions.

The decision support systems explored in this article enable users to assess the long-term impacts of their decisions and analyze the outcomes of various alternative future scenarios. This paper outlines how the decision tree-based scenario management system dynamically personalizes each user's experience and models optimal decision-making processes.

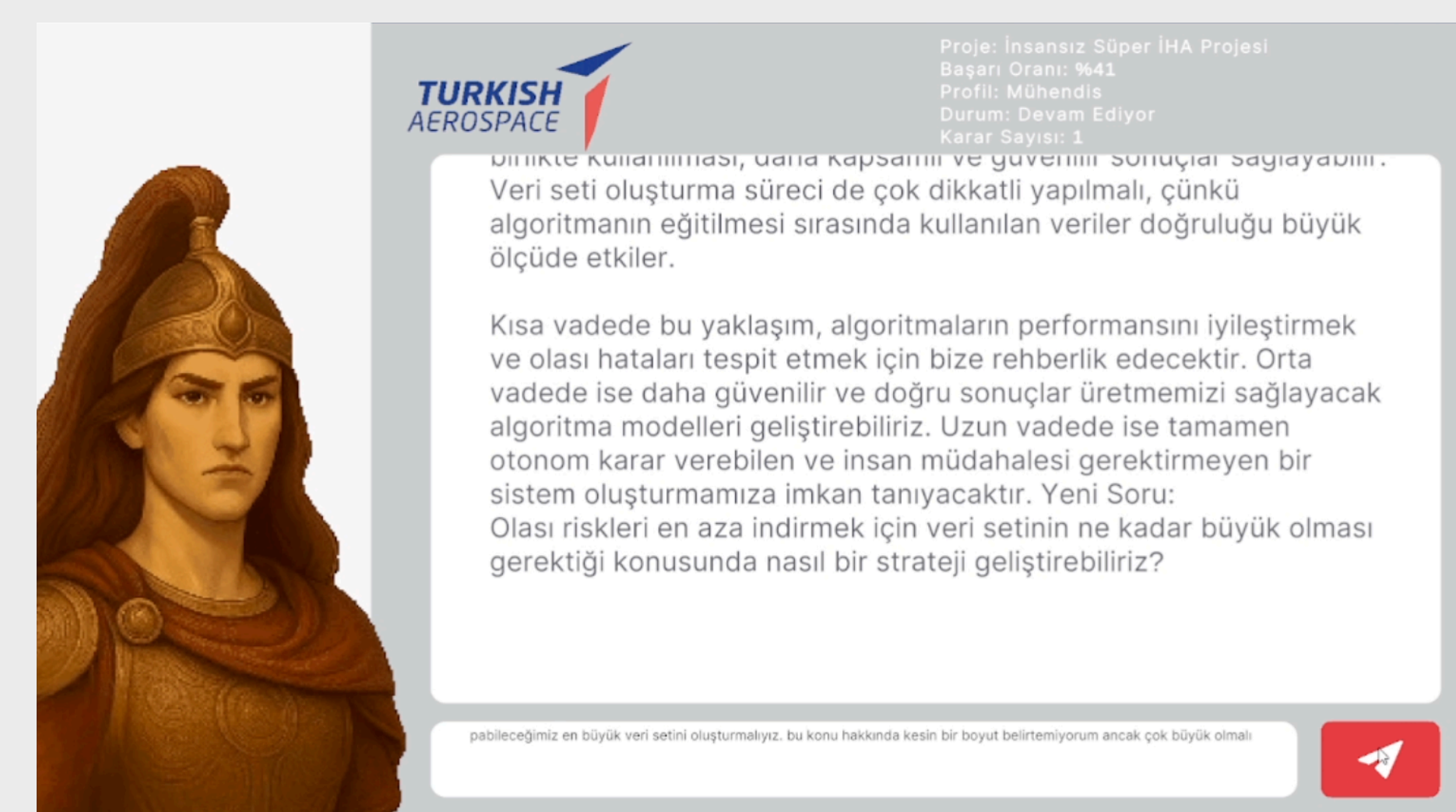
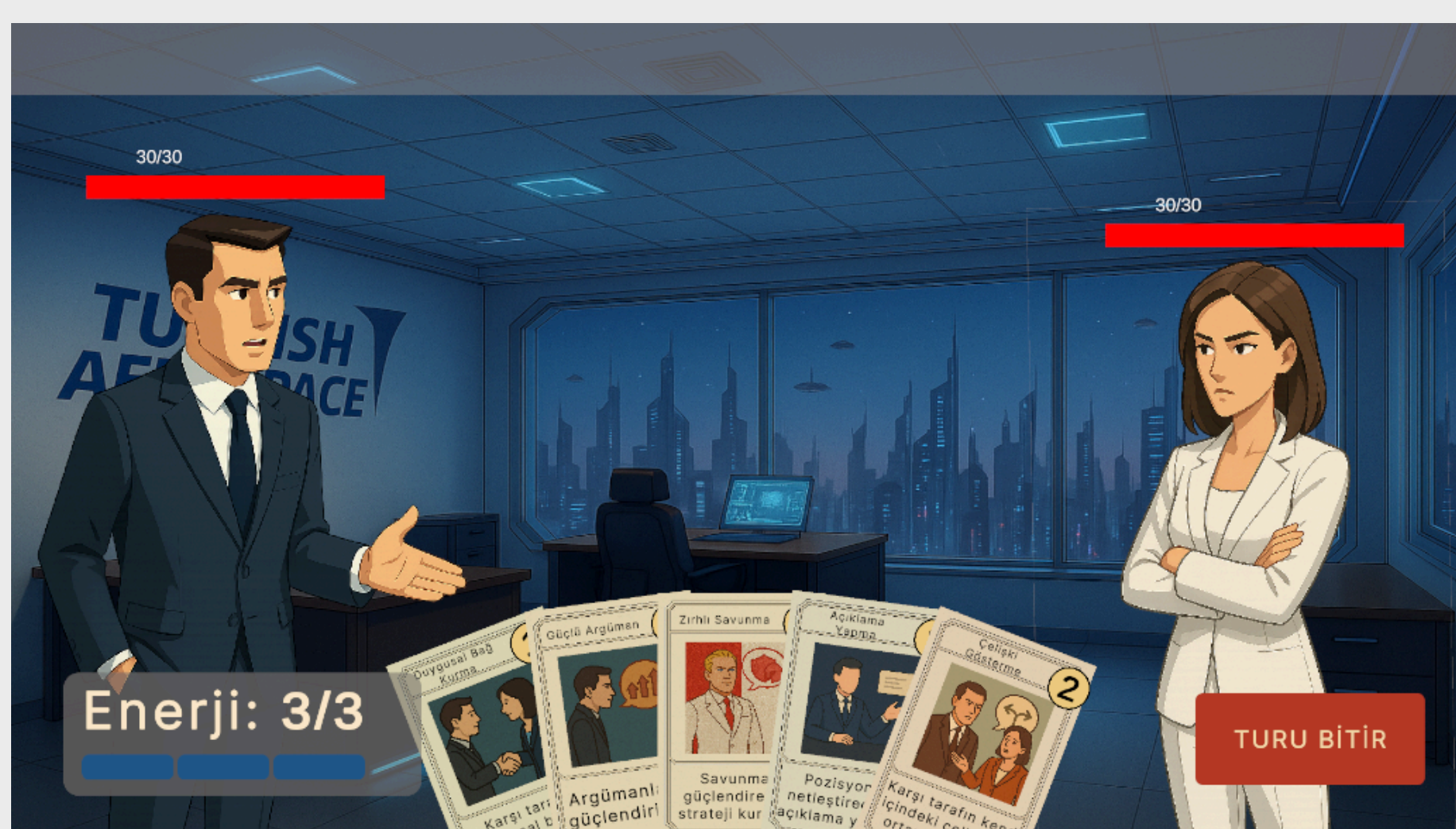
This article presents an advanced environment that enhances crisis management, resource allocation, and real-time decision-making skills. The foresight-based card game format provides a mechanism that immediately impacts players' decision-making processes in response to specific technological trends. Thanks to decision tree-based scenarios, users are able to test the effectiveness of technologies and analyze potential gaps.

## Methods

This study presents a digital foresight simulation developed with Unity and C#, combining decision trees and natural language processing to create an interactive card-based experience.

Users face scenario-driven challenges, making decisions via both open- and closed-ended prompts. While closed responses adjust game variables directly, open-ended answers are analyzed with NLP to influence the game flow.

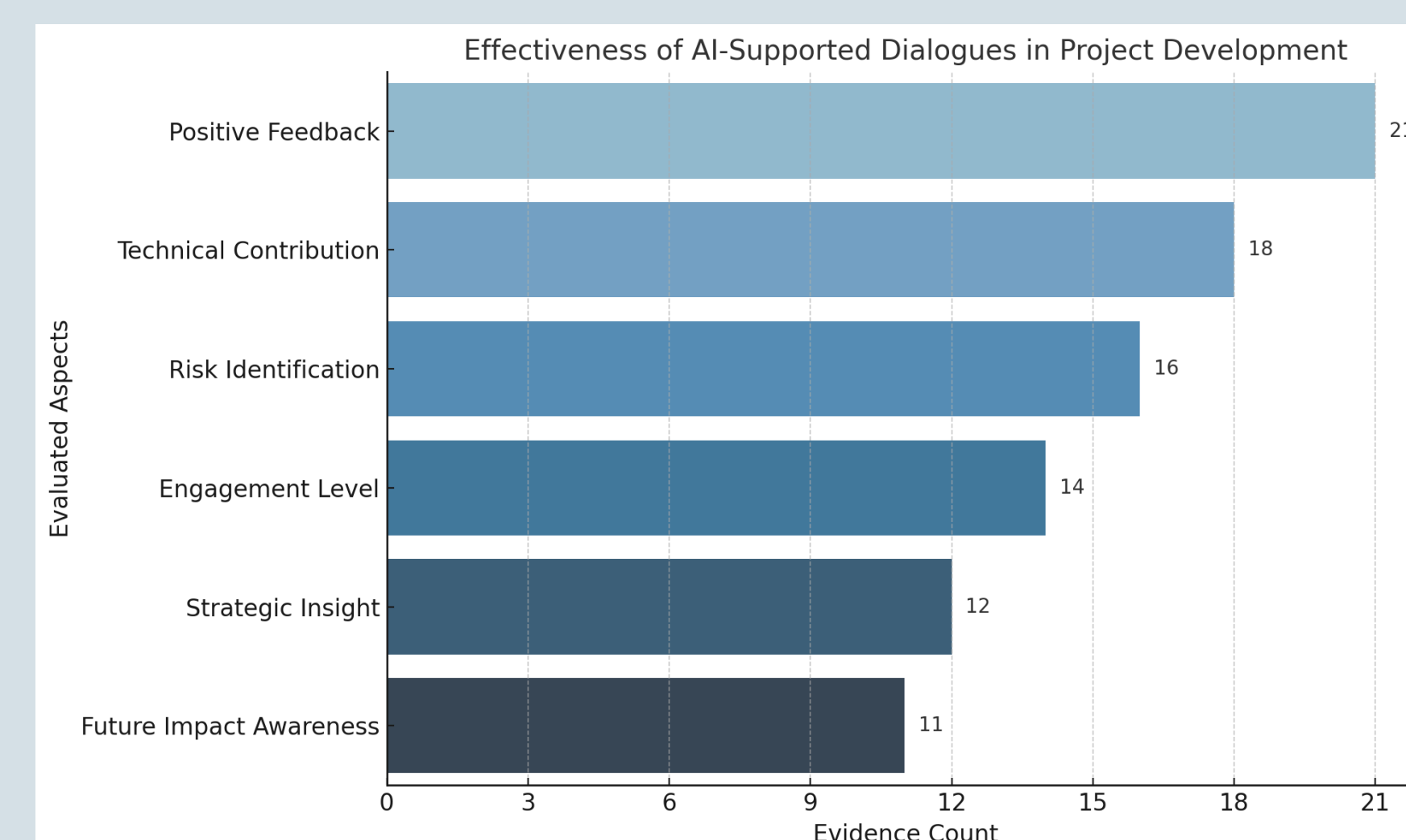
All actions are logged in a PostgreSQL database and processed with AI tools to assess strategic thinking and adaptability. The system features a stylized low-poly interface, branching scenario paths, and real-time feedback—offering a scalable and engaging environment for exploring decision-making under uncertainty.



## Findings & Conclusion

Our digital foresight wargame integrated an AI dialogue system that analyzed user interactions to reveal how participants thought, learned, and adapted. Analysis of user–AI conversations showed improvements in six key areas: feedback quality, technical reasoning, risk awareness, engagement, strategic thinking, and future foresight. These results confirm that AI-supported simulations do more than train decision-making—they actively develop strategic awareness and future-oriented thinking.

This study presents a novel, interactive foresight model that merges business wargaming with AI and gamified learning. By combining decision trees, natural language processing, and adaptive feedback, the system transforms users into engaged, reflective participants. The findings suggest that such platforms are not only effective in enhancing individual foresight but also scalable for broader organizational learning in uncertain environments.



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## Our Article

