CSE 493V

VR Systems

Grocery Store Simulator

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Abstract

Our project is an immersive grocery store simulator designed to help college students and young adults living on their own for the first time develop essential budgeting, meal planning, and grocery shopping skills. Users will navigate a virtual grocery store using handheld controllers where they are tasked with completing challenges like shopping for a week's worth of groceries or creating dishes on a budget—all while racing against the clock. They must balance their budget, adapt to real-world obstacles like sudden out-of-stock items and dietary restrictions to develop shopping skills for independent living.

Motivation

Many college students and young adults living on their own for the first time, lack the ability to budget and meal plan, both essential but overlooked life skills. By creating an immersive, interactive grocery shopping simulator, we provide a hands-on learning experience in essential life skills that are rarely taught in school and often learned through trial and error.

Approach

Our approach was to simulate a real-world grocery shopping experience, such as limited budgets, time constraints, and unpredictable factors like stock shortages. We hypothesize that simulating real-life shopping obstacles will enhance financial literacy and decision-making skills in young adults and college students.

Limitations

This grocery store simulator is limited by its focus on basic budgeting and meal planning, without advanced features like multi-item discounts or coupons. Additionally, it currently offers only a single-player experience, lacking multiplayer functionality for collaborative decision-making and social learning.

Method

The first component to our project is creating a real-world grocery shopping experience. We built the scene using low-poly assets found in the Unity assets store. The objects we used include fruits, vegetables, shopping cart, grocery store shelving, and a checkout area. Our grocery store selection is not as robust as a real-life grocery store and we focused mainly on whole foods and ingredients, omitting things like snacks and seasonings.
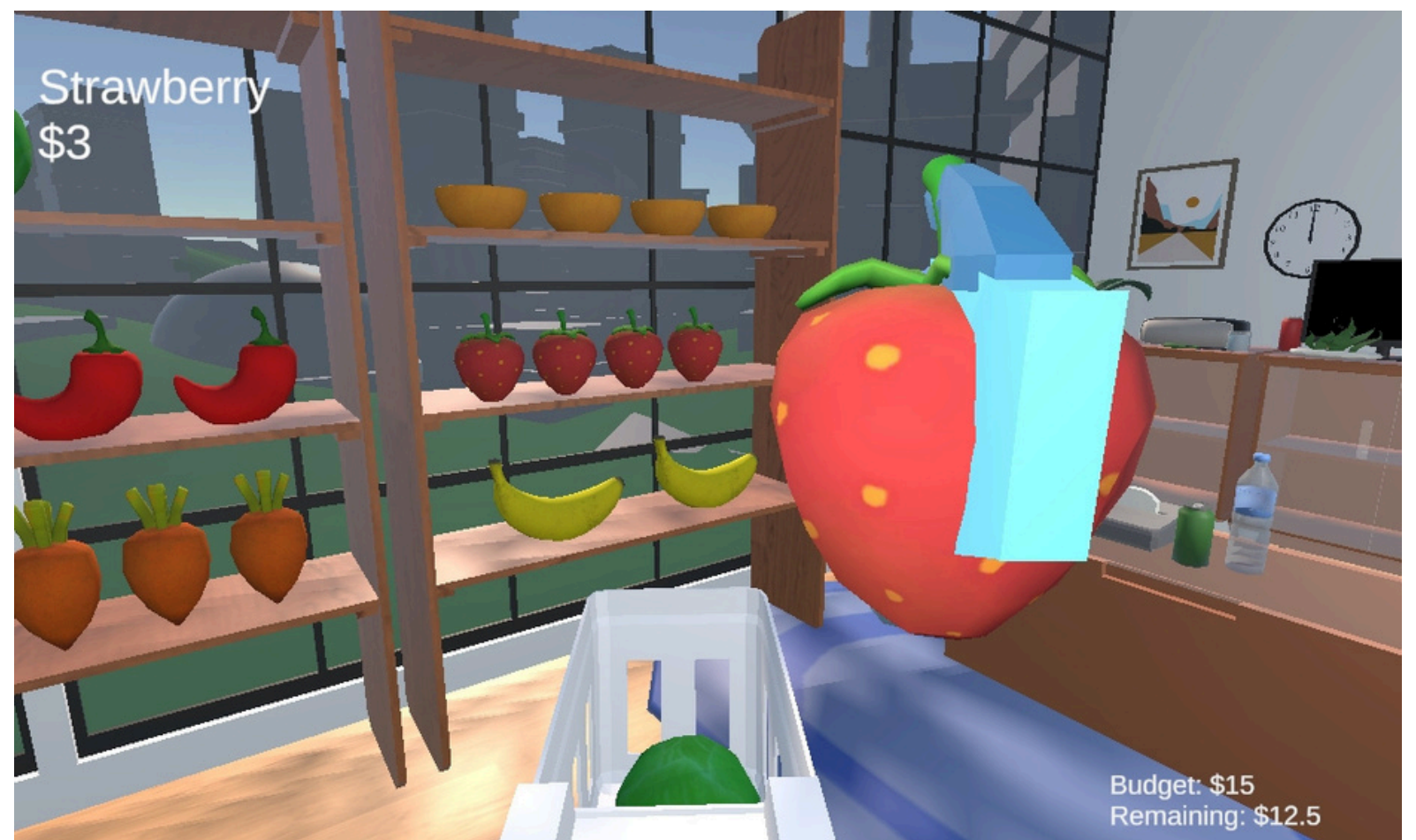
Results

Through this project, we found that users engaged more deeply with budgeting concepts when faced with time-sensitive and adaptive challenges. Our project suggests that such simulations could help develop long-term habits for responsible spending and meal planning. Overall, the results highlight the simulator's ability to promote financial decision-making in a controlled, interactive environment. Future work could integrate multiplayer experiences for collaborative budgeting, or expanding the simulator to cover different cultural food markets and dietary needs.

Scan our QR code for the full report on our project