

CONCENTRATION

Epson Manipulator Card Sorting System

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Abstract—An implementation of an Epson robotic arm as a card sorting mechanism aimed towards mimicing human style situational problem solving regarding the game Concentration (A.K.A. Memory) with the intent on addressing methods to simplify decision making processes for the game Set. By first addressing a simpler problem we can assess the suitability of this system overall in performing complex sorting operations in a way that directly mimics the way a human would perform the task.

I. INTRODUCTION

The card game Concentration begins with a set of cards placed face down on a table. The player's objective is to pick up one card at a time and match it with another they have already seen before based on a specified criteria. This form of concentration is a building block to the game Set in that the similarity criteria can be modified and be made more complex. Something as simple as having the same card in every way to matching cards that share only some features.

n over pairs of matching cards. Concentration can be played with any number of players or as solitaire and is an especially good game for young children, though adults may find it challenging and stimulating as well. The scheme is often used in quiz shows and can be employed as an educational game.

I wish you the best of success.

mds

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II. BACKGROUND

Background: Describe related work that has been published in the literature. What papers, books and other resources have you consulted and how does their work relate to yours? What outcomes and possible innovation are you hoping to achieve?

A. Program Control Paradigms

B. Vision Detection Principles

C. Motion

III. EXPERIMENTAL DESIGN

Experimental Setup or Design: Describe your experiment or the design of the system you are developing.

A. Program Control Paradigms

B. Vision Detection Principles

C. Motion

IV. RESULTS

Results: Show the results you have achieved. Consider how you might present these results in a clear and concise manner. Although you will understand the significance of the results, make sure it is clear to the reader as well.

V. DISCUSSION

Discussion: What are the implications of your results? What are the limitations of what you have done and how might the experiment/design be improved in the future?

VI. CONCLUSIONS AND FUTURE WORK

Conclusions and Future Work: Discuss the implications of the results in a broader context, drawing conclusions and providing directions for future research in the area.

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REFERENCES

- [1] H. Kopka and P. W. Daly, *A Guide to L^AT_EX*, 3rd ed. Harlow, England: Addison-Wesley, 1999.