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**AI PLAYING FLAPPY BIRD**

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**Objective Of the project**

The aim of this system is to make the machine understand the game so deeply that it plays the game without failing or causing any mistake.

The machine understands the pattern of the game on its own and creates an optimal pathway to tackle the problem and learns on its own. Ai in the field of gaming can help the gaming experience exponentially.

Genetic Algorithms and Reinforcement Learning are useful for finding solutions to problems for which there is no clear solution and the situations vary with time, i.e. for probabilistic situations. In this project, we have implemented an AI for the Flappy Bird which makes the computer play the game much more efficient as compared to what a normal human being can do. We have achieved these goals using Genetic Algorithms with an underlying Neural Network Architecture

**Features of the project are as follows:**

• Fully automatic

• Interactive game

• Better accuracy

• virtual and dynamic in nature

**Feasibility Study:**

After doing the project Ai playing flappy bird , study and analyzing all the existing or required functionalities of the system, the next task is to do the feasibility study for the project. All projects are feasible - given unlimited resources and infinite time. Feasibility study includes consideration of all the possible ways to provide a solution to the given problem. The proposed solution should satisfy all the user requirements and

should be flexible enough so that future changes can be easily done based on the future upcoming requirements.

**A. Economical Feasibility**

This is a very important aspect to be considered while developing a project. We decided the technology based on minimum possible cost factor.

• All hardware and software cost has to be borne by the organization.

• Overall we have estimated that the benefits the organization is going to receive from the proposed system will surely overcome the initial costs and the later on running cost for system.

**B. Technical Feasibility**

This included the study of function, performance and constraints that may affect the ability to achieve an acceptable system. For this feasibility study, we studied complete functionality to be provided in the system, as described in the System Requirement Specification(SRS), and checked if everything was possible.

**C. Operational Feasibility**

No doubt the proposed system is fully AI based that is the user is not considered to be the person who is playing the game.

The game is easy to play and very easy to be operated

**HARDWARE REQUIREMENT SPECIFICATION**

|  |  |
| --- | --- |
| **NAME OF THE COMPONENT** | **SPECIFICATION** |
| **Processor** | Pentium III 630MHz or more |
| **RAM** | 128MB or more |
| **Hard disk** | 20 GB or more |
| **Monitor** | 15” color monitor or advance |
| **Keyboard** | Any keyboard |
| **Mouse** | Any mouse |

**Conclusion of the Project AI Playing Flappy Bird:**

I felt great while working on this project. I was quite fascinated by the fact that such simple ”random” updates can develop such undefeatable game players. Also, the idea of evolution behind the Genetic Algorithms is also quite interesting.

Artificial Intelligence is now being widely used in a variety of businesses and games. Artificial Intelligence and the technology are one side of the life that always interest and surprise us with the new ideas, topics, innovations, products …etc. AI is still not implemented as the films representing it(i.e. intelligent robots), however there are many important tries to reach the level and to compete in market, like sometimes the robots that they show in TV. Nevertheless, the hidden projects and the development in industrial companies.