Ariel Dynamics Inc. Media Library - Video

Equestrian Analysis

Code	**adi-vid-01107**
Title	Equestrian Analysis
Subtitle	Analysis of Horses
Description	Analysis of Horses
Subject	Horses;Performance Analysis
Duration	00:05:06
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Video Digitizing System for Horse Analysis

Our advanced video digitizing system is capable of analyzing horses' movements. The system can mark horses with points or reflective points, or even without marks, and capture their gait through video cameras. The system can operate at various speeds and can digitize the images automatically into the computer memory. This allows for the analysis of the displacement, velocity, and acceleration of each body segment of the horse.

The system can provide a stick figure representation of the horse, allowing for a detailed analysis of its movements. This can help in identifying efficient and inefficient horses, and even those that may be going lame. The system also has a three-dimensional capability, allowing for analysis from all angles.
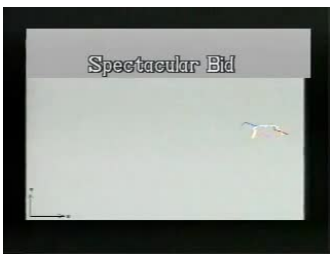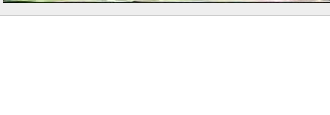
In addition to analyzing the horse, the system can also analyze the rider or jockey. This can help in understanding the interaction between the horse and the rider, and how it affects the horse's gait. The system can also analyze jump horses, providing insights into their jumping technique.
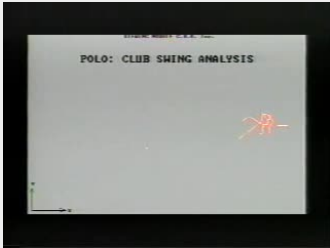
The system can provide valuable insights to trainers, owners, and rehabilitative personnel, helping them optimize the performance of their horses.

Model Id: gpt-4-0613
Created on: 2023-09-19 01:50:53
Processing time: 00:00:17.4770000
Total tokens: 1191

Audio transcription

Frame	#	Time	Spoken text
	0.	00:00:00	*Our high technology video digitizing system can analyze horses.*
	1.	00:00:14	*The horses can be marked with points or reflective points or without marks and video cameras*
	2.	00:00:20	*taking the gate of the horse.*
	3.	00:00:22	*That can be done in low speed, high speed, medium speed, could be work, thought, gallop.*
	4.	00:00:28	*These pictures are digitized automatically into the computer memory and analyze the displacement*
	5.	00:00:35	*velocity and acceleration of each body segment.*
	6.	00:00:38	*What you see here is the stick figure representation of the horse galloping.*
	7.	00:00:44	*This horse, Arkansas, was not classified a very good horse, but when you look on the head*
	8.	00:00:48	*now you see the head barely moving up and down, which classified as a very good horse.*

Frame	#	Time	Spoken text
	9.	00:00:54	The trainer couldn't tell us that, the owner also couldn't tell us that.
	10.	00:00:58	So the gate of this horse, even though didn't have any bloodline, represent a very very
	11.	00:01:04	efficient horse.
	12.	00:01:05	We can look at it from all angles since we have a three-dimensional capability from the
	13.	00:01:09	front, from the side, from the top.
	14.	00:01:11	We can turn the horse in any angle we want and based on the characteristics of this gate
	15.	00:01:18	we can tell if the horse is efficient or inefficient or maybe going lame and so on.
	16.	00:01:25	You see it's single frame at the time and look on the position of the head.
	17.	00:01:29	In this case we compare the same horse to three other horses.
	18.	00:01:34	To find out how this horse compared to a database of gate of many many horses, to see does his
	19.	00:01:40	limb legs, the falling and the rear limbs going fast, lower or better.
	20.	00:01:45	Here is spectacular bit, one of the greatest horse of all time.
	21.	00:01:48	Again, you see a very unique gate in galloping.
	22.	00:01:52	In addition to the horse, you always have to also analyze the rider on the horse or the
	23.	00:01:58	jockey.
	24.	00:01:59	So after we quantify the movement of everybody's segment, as you see here, we can add the jockey
	25.	00:02:05	on the horse to see what is the interaction.
	26.	00:02:07	Therefore, you see the same motion here in the walk where the jockey is on the horse.
	27.	00:02:12	You can do it again in walking, in trotting and also in galloping.
	28.	00:02:18	You see the reflective points on the horse which later on will reproduce what you see
	29.	00:02:22	now the stick figure of the horse with the jockey.
	30.	00:02:26	You'll be surprised to find out that in many cases the horse will change its gate according
	31.	00:02:33	to the jockey on the horse and what is the most efficient interaction between these two
	32.	00:02:38	biological systems.
	33.	00:02:40	Our high-tech, high-speed video technology can actually give you and optimize this kind
	34.	00:02:46	of characteristics and allow the jockey to maneuver his horse in the best way.
	35.	00:02:52	The same thing we can do with jump horses.
	36.	00:02:56	Horses with jump don't have the same characteristics as the racing horses.
	37.	00:03:00	We can find out how the horse utilizes its technique by raising the full limbs and how
	38.	00:03:05	well it comes with a real limb in order to create a parabolic situation where the center
	39.	00:03:11	of gravity will move as low as possible above the obstacle by the same time will allow the
	40.	00:03:18	limbs to go over the obstacle.
	41.	00:03:20	Here you see the stick figure of the horse jumping at different heights.
	42.	00:03:24	So we start with a low height, we can go to a little bit higher, higher height.

#	Time	Spoken text
43.	00:03:28	*You see a parabolic representation of the center of gravity following a very, very unique*
44.	00:03:35	*pattern.*

#	Time	Spoken text
45.	00:03:36	*Here's a very efficient jumper, the red line that you see is the center of gravity.*
46.	00:03:41	*The goal in a jump is that the body will move the least amount over the hill so you don't*
47.	00:03:48	*lose time while the center of gravity must clear the obstacle because obviously it will*
48.	00:03:53	*not clear the obstacle, the horse actually will touch the obstacle.*
49.	00:03:57	*Here you see the correlation between the head movement to the center of gravity and you*

#	Time	Spoken text
50.	00:04:02	*see that even though the center of gravity full of parabolic phenomena, the head was*
51.	00:04:07	*falling flatter pattern.*
52.	00:04:09	*The same way we can look on everybody's segment, the real limb, the full limb, the head, the*
53.	00:04:15	*center of gravity, plot it on the graph and give it to the trainer.*
54.	00:04:20	*Of course with the game of follow, you also can analyze the efficiency of the pull-up*

#	Time	Spoken text
55.	00:04:25	*player and how to utilize the mallet in order to hit the ball in the most efficient way.*
56.	00:04:33	*People spend millions of dollar horses for follow but by utilizing a better technique*
57.	00:04:38	*and a better gate on the horse, they can create better results.*
58.	00:04:43	*So what we're showing you here in general is that this high technology of the area performance*
59.	00:04:48	*analysis system can add tremendous avenue to you as a trainer, owner or a rehabilitative*

#	Time	Spoken text
60.	00:04:55	*personnel that can make the horse perfect.*

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