

AI APPLICATIONS IN THE VETERINARY WORLD ENHANCING ANIMAL HEALTH AND CARE

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INTRODUCTION TO AI IN VETERINARY MEDICINE

What is AI:

Artificial intelligence is a field of science concerned with building computers and machines that can reason, learn, and act in such a way that would normally require human intelligence or that involves data whose scale exceeds what humans can analyze.

1. Narrow AI(weak): designed for training, PA (Siri/Alexa)
2. General AI & Superintelligence (strong): designed to perform any intellectual task that a human can do (theoretical)



DIAGNOSTICS & IMAGING IN VETERINARY MEDICINE

AI in Imaging: Use in interpretation of x rays, MRI, and CT scans



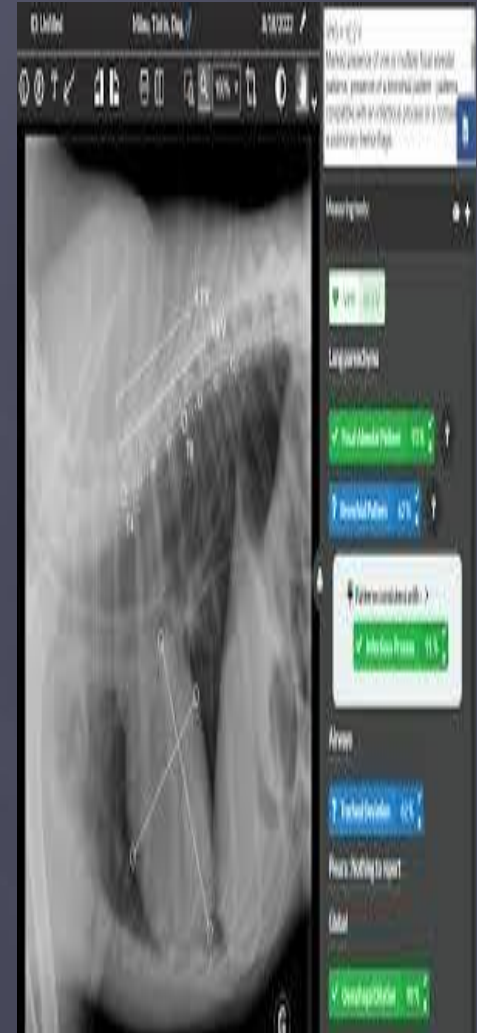
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AI in Imaging: Use in interpretation of x rays, MRI, and CT

Using advanced algorithms to assist radiologist in diagnostics

1. Zebra Medical Vision : AI powered tool : (x ray):lung dises. Fract tumors

2. Qure.ai: Specilized in alogorthms to detect abnormal in xrays
Fractures, TB



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Predictive Analytics :

1. Disease Prediction : Genetics, Trends
2. AI modules : Early detection
3. Data management
4. Improved efficiency: streamlining Admin tasks



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Robotic Surgeries :

1. Precision Surgeries : Using AI assisted robotic tools
2. AI Robotic Surgens: Higher precision, less invasive



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Animal Behavior Understanding :

1.AI in behavior monitoring

2.Applications : Training, welfare improvement





DIAGNOSTICS & IMAGING IN VETERINARY MEDICINE

Case Studies :

Case 1: Smiithe. Intact male, DOB 12/5/2021 , Fully vaccinated , BAR?? normal , w:4.8kg, Temp:38.3C !, Rehyd test : 2sec, CRT 3.5 sec?, appetite :eating not much , , CBC : WBC HIGH / GHP : ALT HIGH , Auscult: wheezing , cardiac US 3 chamber clear , 4 chamber US TCV delay minor

Owner stated that Smiithe is not himself in the night coughing with discharge from nose ..WHAT IS YOUR DIAGNOSIS ???





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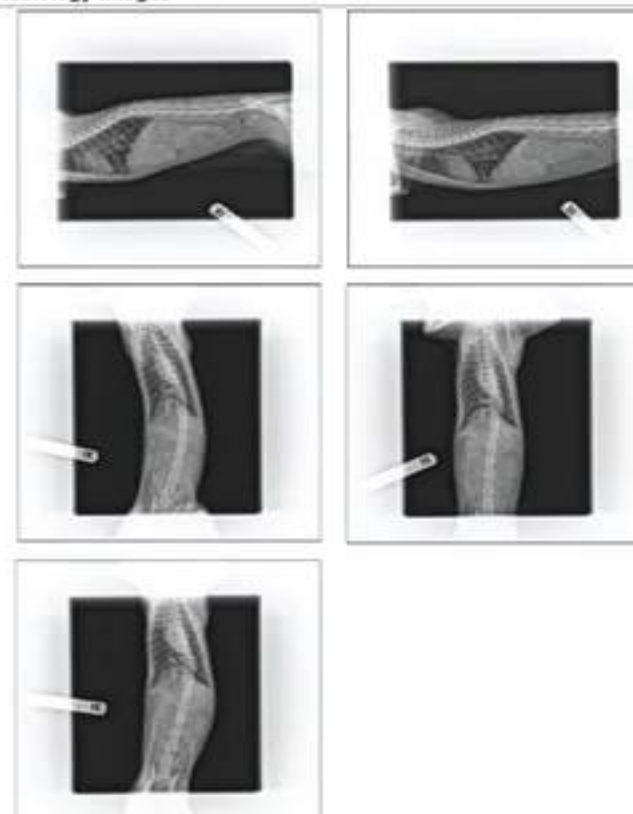
SignalPET

Tests

	Confidence	
	Normal	Abnormal
Bronchial Pulmonary Pattern		
Gastric Distension		
Patchy Interstitial Pattern		
Pulmonary Nodule		
Bronchointerstitial Pattern		
Caudodorsal Parenchymal Pattern		
Gastric Foreign Material		
Two Populations of Small Intestine		
Aggressive Bone Lesions		
Appendicular Bone Fracture		
Colonic Foreign Material		
Cranioventral Parenchymal Pattern		
Diffuse Parenchymal Pattern		
Esophageal Distension		
Esophageal Foreign Body		
Hepatomegaly		
Mid Abdominal Mass		
Nodular or Miliary Pattern		
Pelvic Fracture		
Peritoneal fluid		
Pleural fluid		
Pleural Gas		
Pulmonary Mass(es)		
Renal Mineralization		
Renomegaly		
Retroperitoneal fluid		
Shoulder Arthropathy		
Small Intestinal Foreign Material		
Small Intestinal Plication		
Small Kidney		
Spondylitis		
Thoracolumbar Disc Space Narrowing		
Urinary Bladder Calculi		

SignalPET

Radiology Images



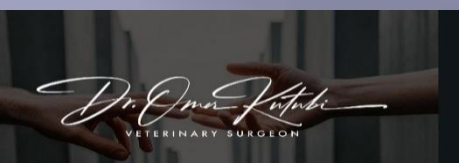


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Future Prospects:

1. Trends: Emerging Trends in AI For Vet Med
2. Research Directions: Area of future studies



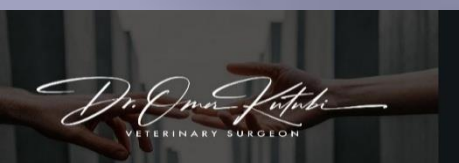


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Challenges and Ethical Considerations :

- 1.Data Privacy :Concerns about handling sensitive information
- 2.Bias in AI: ensure Unbiased AI systems
- 3.Ovrerriding human command





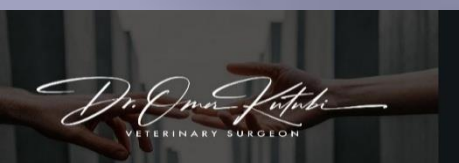
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#Conclusion:

Uses of AI

Future Image of AI Applications





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Q & A





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THANK YOU



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