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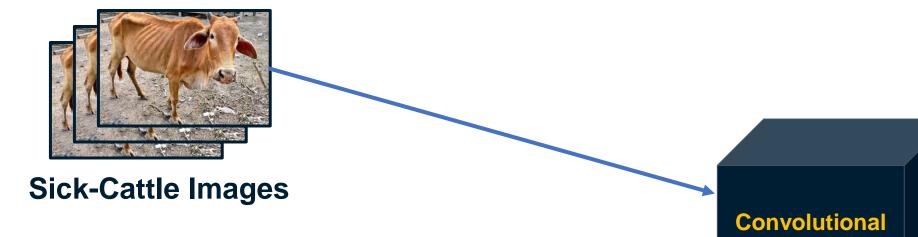
Mauricio Toro





Training Process







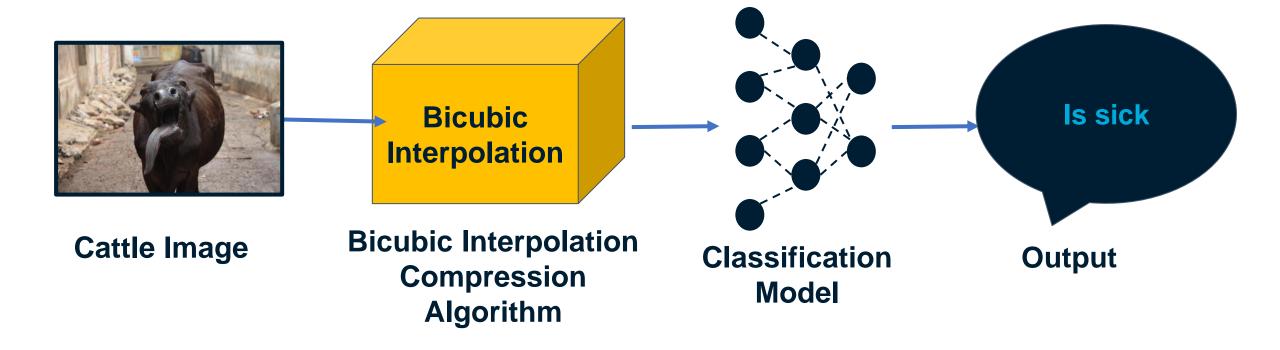
Healthy-Cattle Images





Testing Process

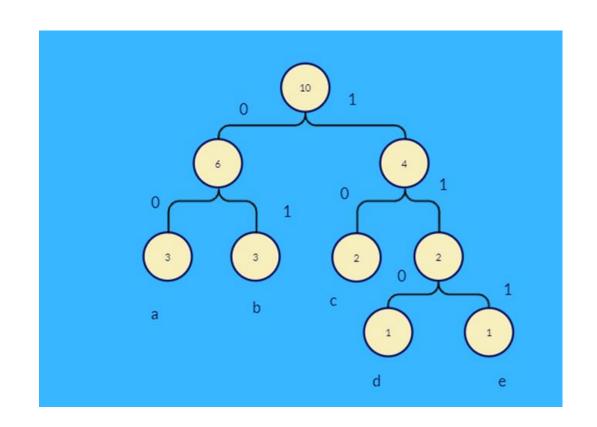






Compression Algorithm Design







Huffman coding python implements based on the frequency of each character



Compression Algorithm Design



			10.2	9.9	9.3	9		
10	9	2x	9.6	9.2	8.7	8.4		
8	7		8.5	8.2	7.6	7.3		
2x	2		7.9	7.6	6.9	6.7		
array([[10,10,10,9,9,9] [10,10,10,9,9,9] [10,10,10,9,9,9] [8,8,8,7,7,7] [8,8,8,7,7,7] [8,8,8,7,7,7]								

This is a part of the way that the bicubic interpolation is performed on images





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Compression Algorithm Complexity

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Create the table in Powerpoint. Do not copy pixelated screenshots from the technical report please!

	Time Complexity	Memory Complexity
Image compression	O(N ² *M*2 ^M)	O(N*M*2 ^M)
Image decompression	O(N*M)	O(1)

Time and memory complexity of the (In this semester, one could be LZS, LZ77, LZ78, Huffman... please choose) algorithm. Please explain what do N and M mean in this problem. PLEASE DO IT!

Explain the tables in your own words





Include a HD picture related to the problem of animal health in precision livestock farming

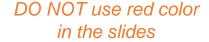




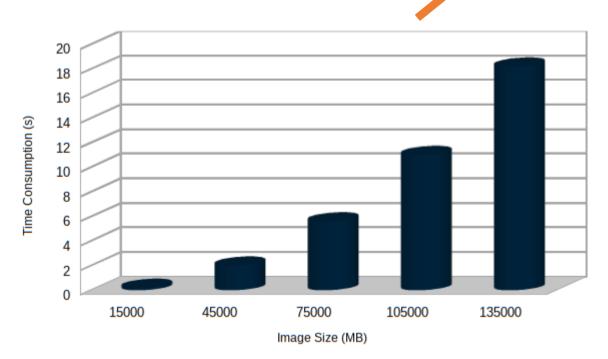
Time and Memory Consumption

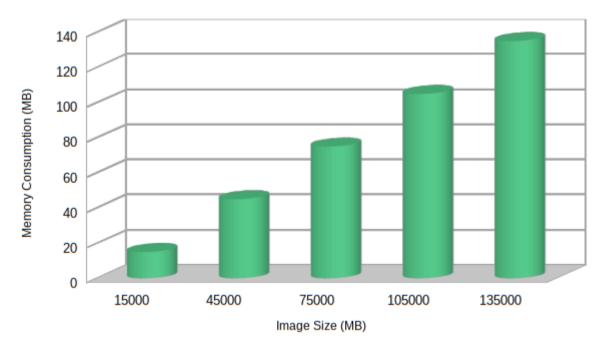






Create the plots in Excel. Do not copy pixelated screenshots from the technical report please!











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Average Compression Ratio

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	Compression Ratio
Healthy Cattle	100 : 1
Sick Cattle	98 : 1

Average compression ratio for Healthy Cattle and Sick Cattle.





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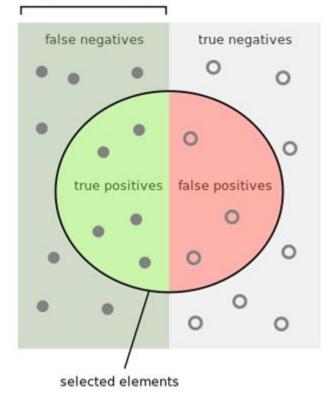


Classification Evaluation Metrics



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relevant elements



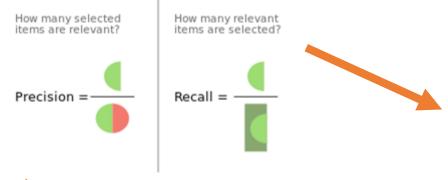


Keep this title

Use vectorized figures to explain the algorithm the evaluation metrics, so they are not pixelated like mines

Use these Colors for Your figures

• • • •



If possible, avoid equations for simple concepts that can be explained through diagrams

Explain Accuracy too...

Create a graphical representation using the notation proposed in this slide



Classification Evaluation Metrics



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Create the table in Powerpoint. Do not copy pixelated screenshots from the technical report please!

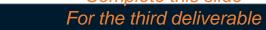
	Testing data set (original images)	Testing data set (compressed images)
Accuracy	0.3	0.2
Precision	0.25	0.21
Recall	0.12	0.11

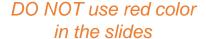
Evaluation metrics using a testing dataset of ?? healthy cattle and ?? sick cattle images. Compressed images were obtained with ??? algorithm (Please, complete with your algorithm)



Include a HD picture related to the problem of animal health in precision livestock farming









Include the citation of the report in arXiv and link. Alternatively, use OSF

C. Patiño-Forero, M. Agudelo-Toro, and M. Toro. Planning system for deliveries in Medellín. ArXiv e-prints, Nov. 2016. Available at: https://arxiv.org/abs/1611.04156

> Include a screenshot



arXiv.org > cs > arXiv:1611.04156

Computer Science > Data Structures and Algorithms

[Submitted on 13 Nov 2016]

Planning system for deliveries in Medellín

Catalina Patiño-Forero, Mateo Agudelo-Toro, Mauricio Toro

Here we present the implementation of an application capable of planning the shortest delivery route in the city of Medellín, Colombia. We discuss the different approaches to this problem which is similar to the famous Traveling Salesman Problem (TSP), but differs in the fact that, in our problem, we can visit each place (or vertex) more than once. Solving this problem is important since it would help people, especially stores with delivering services, to save time and money spent in fuel, because they can plan any route in an efficient way.

5 pages, 9 figures

Data Structures and Algorithms (cs.DS)

ACM classes: F.2.0; G.2.2

Cite as: arXiv:1611.04156 [cs.DS]

(or arXiv:1611.04156v1 [cs.DS] for this version)





THANK YOU!