



(Tıbbi) Görüntü İşleme

Medical Image Processing

Hedef

- *İki Görüntü İşlemleri*
- *Uygulama*

İki Görüntü İşlemleri

- Add (toplama)
- Subtract (çıkarma)
- Intersect (kesişim)
- Merge (birleştirme)

Ön Şartlar

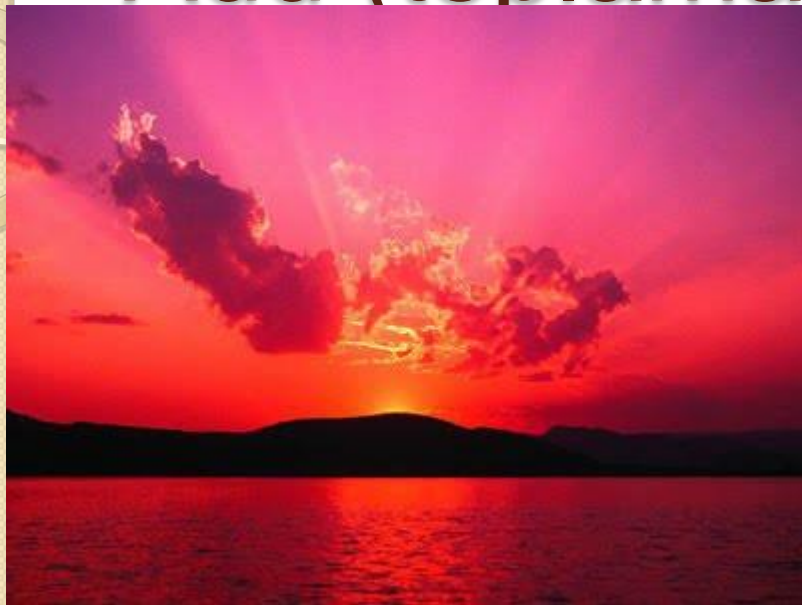
- Aynı boyutlarda olmalı
- Aynı renk uzayında olmalı
- Aynı renk bitinde olmalı

Add (toplama)

- Her pikseller sırasıyla toplanır.
- max değeri geçenler indirgenir.
- Yeni görüntü oluşturulur.

	1. Resimden				2. Resimden				Sonuç Resim		
	R1	G1	B1		R2	G2	B2		$R=R1+R2$	$G=G1+G2$	$B=B1+B2$
1	119	43	107		225	253	255		344	296	362
2	117	41	105		223	253	255		340	294	360
3	116	40	104		221	252	255		337	292	359
4	118	42	106		218	252	254		336	294	360
5	119	43	107		217	252	255		336	295	362
6	118	42	106		214	254	255		332	296	361
7	119	43	107		211	252	255		330	295	362
8	121	45	109		209	250	254		330	295	363
9	128	46	110		204	249	252		332	295	362
10	122	40	104		204	249	252		326	289	356

Add (toplama)



Subtract (çıkarma)

- Her pikseller sırasıyla çıkarılır.
- min değerden düşenler yükseltilir.
- Yeni görüntü oluşturulur.

Subtract (çıkarma)



Subtract (çıkarma)

Sonnet for Lena

O dear Lena, your beauty is so vast
It is hard sometimes to describe it fast.
I thought the entire world I would impress
If only your portrait I could compress.
Alas! First when I tried to use VQ
I found that your cheeks belong to only you.
Your silky hair contains a thousand lines
Hard to match with sums of discrete cosines.
And for your lips, sensual and tactual
Thirteen Crays found not the proper fractal.
And while these setbacks are all quite severe
I might have fixed them with hacks here or there
But when filters took sparkle from your eyes
I said, 'Damn all this. I'll just digitize.'

Thomas Colthurst

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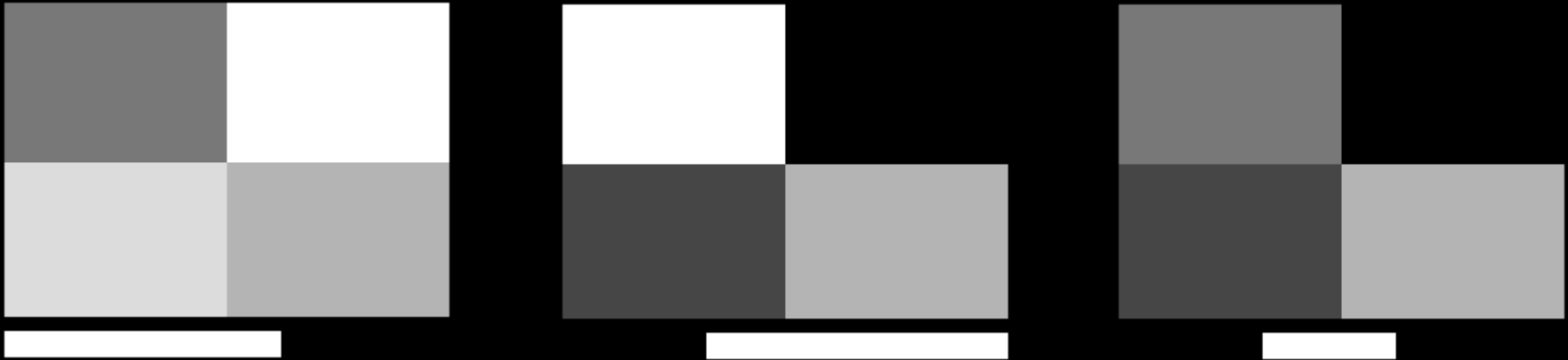
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David A. Colthurst

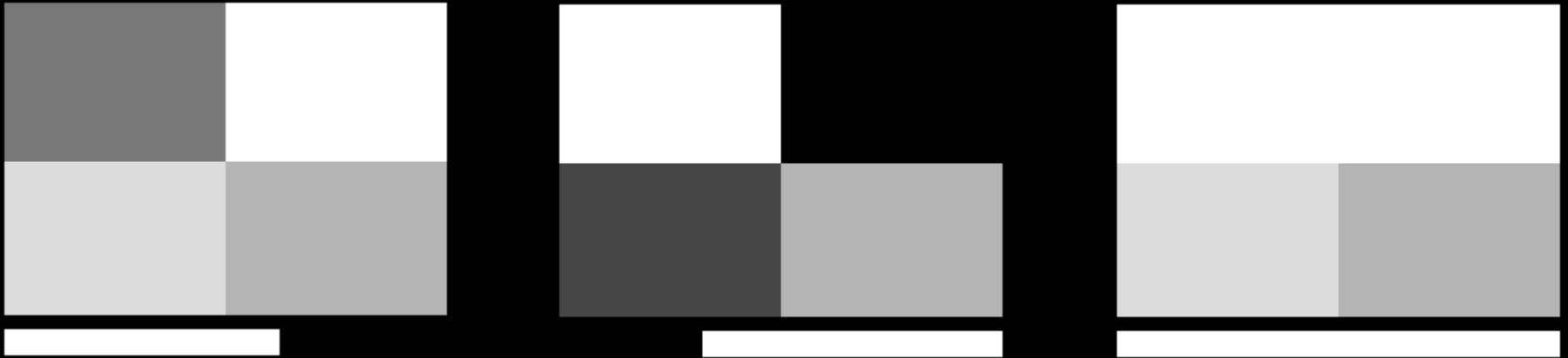
Intersect (kesişim)

- Her pikseller sırasıyla karşılaştırılır.
- Küçük piksel değeri alınır.
- Yeni görüntü oluşturulur.



Merge (birleştirme)

- Her pikseller sırasıyla karşılaştırılır.
- Büyük piksel değeri alınır.
- Yeni görüntü oluşturulur.

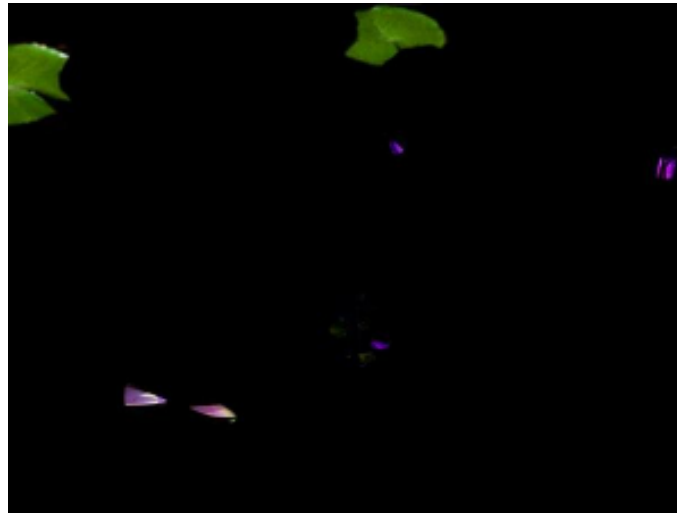


İki Resimdeki 7 Fark Oyunu

- Hangi yöntem?



İki Resimdeki 7 Fark Oyunu



Uygulama

- İki görüntü arasında
 - add
 - subtract
 - intersect
 - merge

Kaynakça

- www.aforgenet.com