



UNIVERSITY OF
SOUTH CAROLINA

CSCE 590 INTRODUCTION TO IMAGE PROCESSING

Convolutions and Neurons

Convolution

$1/9$	$1/9$	$1/9$
$1/9$	$1/9$	$1/9$
$1/9$	$1/9$	$1/9$



Convolution

1/9	1/9	1/9							
1/9	1/9	1/9							
1/9	1/9	1/9							



Convolution

1 a /9	1 b /9	1 c /9							
1 d /9	1 e /9	1 f /9							
1 g /9	1 h /9	1 i /9							



Convolution

	1/9	1/9	1/9						
	1/9	1/9	1/9						
	1/9	1/9	1/9						



Convolution

		1/9	1/9	1/9					
		1/9	1/9	1/9					
		1/9	1/9	1/9					



Convolution

			1/9	1/9	1/9				
			1/9	1/9	1/9				
			1/9	1/9	1/9				



Convolution

1/9	1/9	1/9							
1/9	1/9	1/9							
1/9	1/9	1/9							

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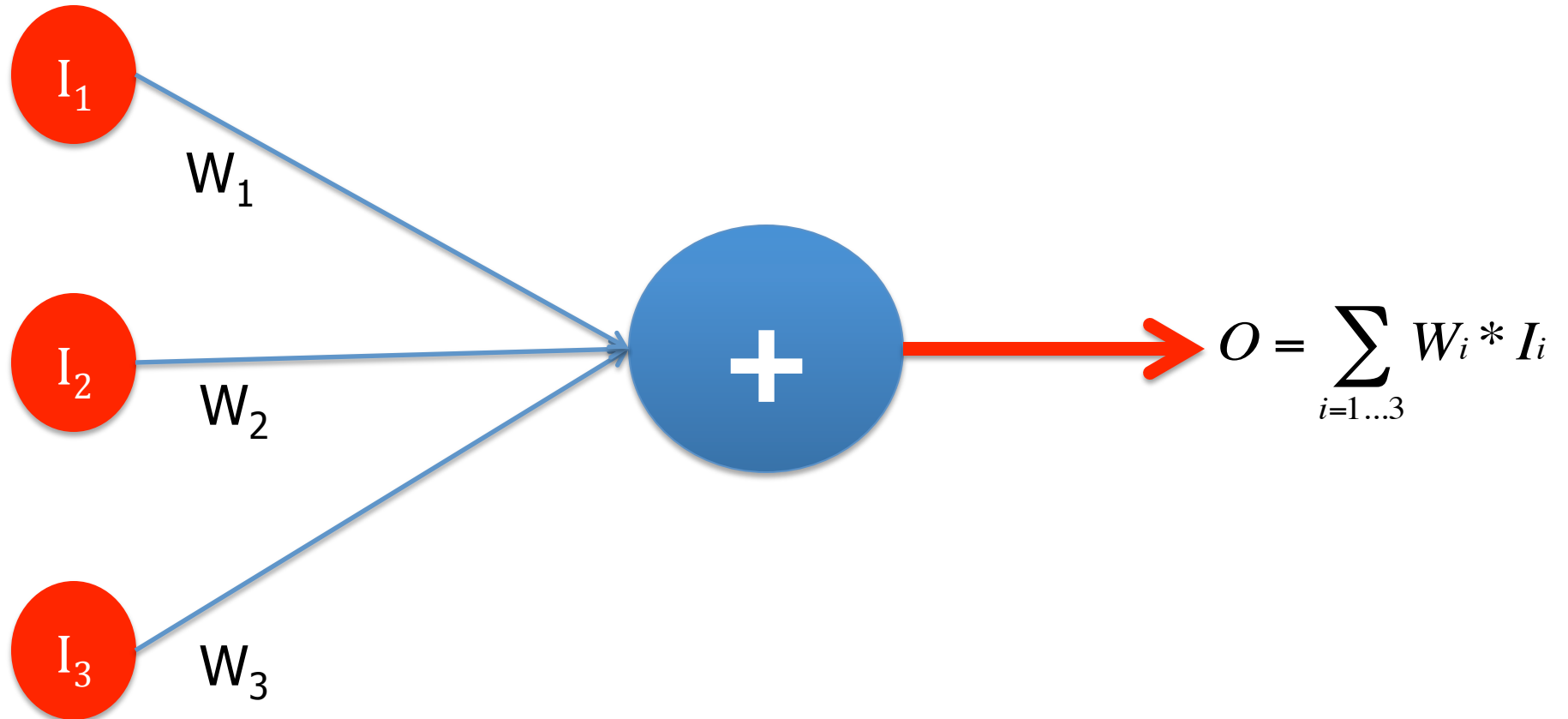
Serialization

a	b	c
d	e	f
g	h	i

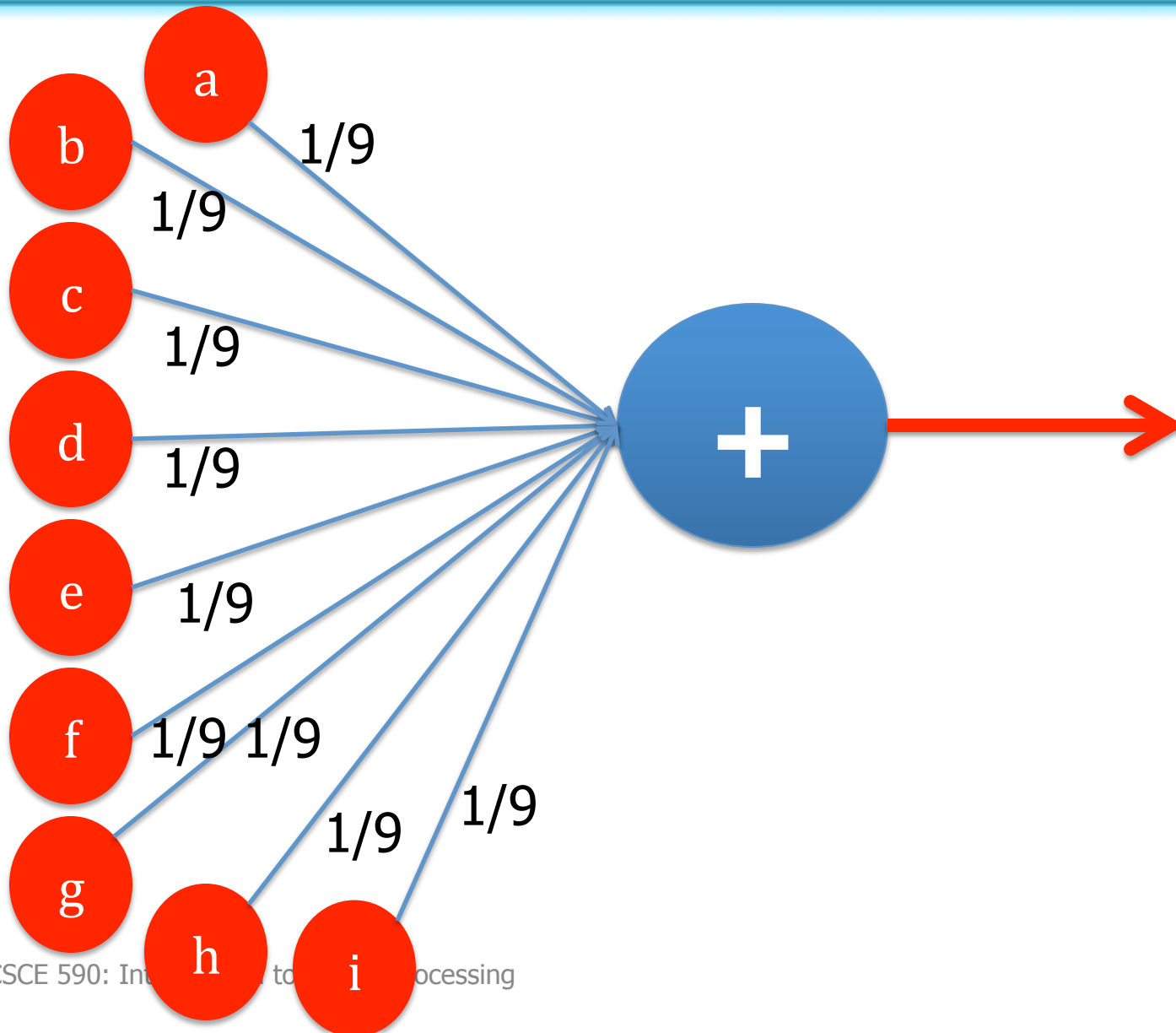
a	b	c	d	e	f	g	h	i
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Neuron



Neuron



Questions?

