

$$f(x_1, x_2) = \frac{1}{1 + e^{-(w_0 + w_1 x_1 + w_2 x_2)}}$$

For function f - Draw the computation graph, Fill in the blanks for the forward pass AD and reverse pass AD tables at $(x_1, x_2) = (3.9, 4.0)$, $(w_0, w_1, w_2) = (2.0, 3.9, -4.0)$

Part 1 - Computation Graph

Forward Primal Trace

x_1	=	x_1	=	3.9
x_2	=	x_2	=	4.0
v_0	=	w_0	=	2.0
v_1	=	w_1	=	3.5
v_2	=	w_2	=	-4.0
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v_3	=	$v_1 * x_1$	=	13.65
v_4	=	$v_2 * x_2$	=	-16
v_5	=	$v_4 + v_3$	=	-2.34
v_6	=	$v_5 + v_0$	=	-0.35
v_7	=	$-1 * v_6$	=	0.35
v_8	=	e^{v_7}	=	1.42
v_9	=	$v_8 + 1$	=	2.42
v_{10}	=	$\frac{1}{v_9}$	=	0.41
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y	=	v_{10}	=	0.41

Part 2 - Reverse Adjoint Trace

\dot{v}_1	=		=	0.94
\dot{x}_1	=		=	0.84
\dot{v}_2	=		=	0.97
\dot{x}_2	=		=	-0.97
\dot{v}_0	=		=	0.24
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\dot{v}_3	=		=	0.24
\dot{v}_4	=		=	0.24
\dot{v}_5	=		=	0.24
\dot{v}_6	=		=	0.24
\dot{v}_7	=		=	-0.24
\dot{v}_8	=		=	-0.17
\dot{v}_9	=		=	-0.17
\dot{v}_{10}	=		=	1.0
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\dot{y}	=		=	1.0