

perception learning example - function AND

| bids input $x_0 = +1$ | | | | | | $\alpha = 0.5$ | | | | | | |
|-----------------------|-------|-------|-------------|-------------|-------------|----------------|----------|----------|---------------------|---------------|-------|-------|
| input | | | weight | | | net sum | target | actual | alpha | weight values | | |
| x_0 | x_1 | x_2 | $x_0 * w_0$ | $x_1 * w_1$ | $x_2 * w_2$ | input | output + | output 0 | error $\alpha(t-0)$ | w_0 | w_1 | w_2 |
| 1 | 0 | 0 | 0.5 | 0 | 0 | 0.5 | 0 | 1 | -0.5 | 0 | 0.5 | 0.5 |
| 1 | 0 | 1 | 0 | 0 | 0.5 | 0.5 | 0 | 1 | -0.5 | -0.5 | 0.5 | 0 |
| 1 | 1 | 0 | -0.5 | 0.5 | 0 | 0 | 0 | 1 | -0.5 | -1 | 0 | 0 |
| 1 | 1 | 1 | -1 | 0 | 0 | -1 | 1 | 0 | 0.5 | -0.5 | 0.5 | 0.5 |
| 1 | 0 | 0 | -0.5 | 0 | 0 | -0.5 | 0 | 0 | 0 | -0.5 | 0.5 | 0.5 |
| 1 | 0 | 1 | -0.5 | 0 | 0.5 | 0 | 0 | 1 | -0.5 | -1 | 0.5 | 0 |
| 1 | 1 | 0 | -1 | 0.5 | 0 | -0.5 | 0 | 0 | 0 | -1 | 0.5 | 0 |
| 1 | 1 | 1 | -1 | 0.5 | 0 | -0.5 | 1 | 0 | -0.5 | -0.5 | 1 | 0.5 |
| 1 | 0 | 0 | -0.5 | 0 | 0 | -0.5 | 0 | 0 | 0 | -0.5 | 1 | 0.5 |
| 1 | 0 | 1 | -0.5 | 0 | 0.5 | 0 | 0 | 1 | -0.5 | -1 | 1 | 0 |
| 1 | 1 | 0 | -1 | 1 | 0 | 0 | 0 | 1 | -0.5 | -1.5 | 0.5 | 0 |
| 1 | 1 | 1 | -1.5 | 0.5 | 0 | -1 | 1 | 0 | 0.5 | -1 | 1 | 0.5 |
| 1 | 0 | 0 | -1 | 0 | 0 | -1 | 0 | 0 | 0 | -1 | 1 | 0.5 |
| 1 | 0 | 1 | -1 | 0 | 0.5 | -0.5 | 0 | 0 | 0 | -1 | 1 | 0.5 |
| 1 | 1 | 0 | -1 | 1 | 0 | 0 | 0 | 1 | -0.5 | -1.5 | 0.5 | 0.5 |
| 1 | 1 | 1 | -1.5 | 1.5 | 0.5 | -0.5 | 1 | 0 | 0.5 | -1 | 1 | 1 |
| 1 | 0 | 0 | -1 | 0 | 0 | -1 | 0 | 0 | 0 | -1 | 1 | 1 |
| 1 | 0 | 1 | -1 | 0 | 1 | 0 | 0 | 1 | -0.5 | -1.5 | 1 | 0.5 |
| 1 | 1 | 0 | -1.5 | 1 | 0 | -0.5 | 0 | 0 | 0 | -1.5 | 1 | 0.5 |
| 1 | 1 | 1 | -1.5 | 1 | 0.5 | 0 | 1 | 1 | 0 | -1.5 | 1 | 0.5 |
| 1 | 0 | 0 | -1.5 | 0 | 0 | -1.5 | 0 | 0 | 0 | -1.5 | 1 | 0.5 |
| 1 | 0 | 1 | -1.5 | 0 | 0.5 | -1 | 0 | 0 | 0 | -1.5 | 1 | 0.5 |
| 1 | 1 | 0 | -1.5 | 1 | 0 | -0.5 | 0 | 0 | 0 | -1.5 | 1 | 0.5 |
| 1 | 1 | 1 | -1.5 | 1 | 0.5 | 0 | 1 | 1 | 0 | -1.5 | 1 | 0.5 |