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Student Researchers – Sam Gregory, Kacey La
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what we did

• we labeled whales



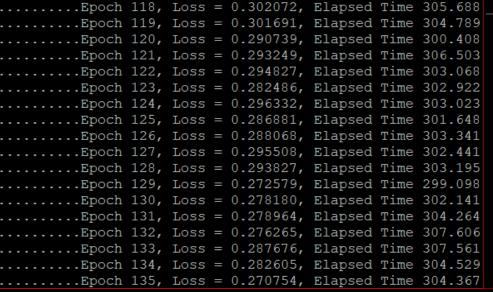
2: TailRight: [1785, 41] **•**[2468, 198] 5: BackLeft: [1946, 992] [2000, 486] 9: Head: [1494, 1621] [1598, 958] [1946, 992] [1452, 1306] Stage 1: Labeling • We made some more labels. And then some more. And more.

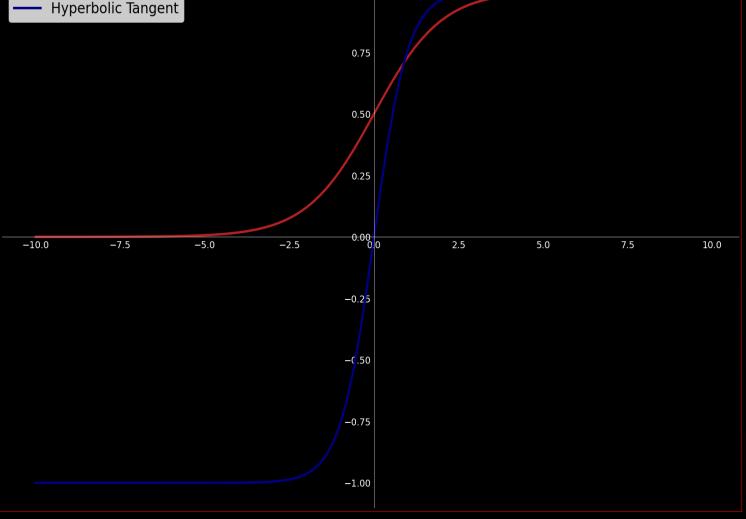
Stage 2: Experimentation $|s(x)| = \frac{1}{1+e^{-x}}$

Sigmoid

$$S(x) = \frac{1}{1+e^{-x}} \text{ vs. } H(x) = \frac{e^x - e^{-x}}{e^x + e^{-x}}$$

- Rotation
- Limit Training Data
- Activation Function
 - Hyperbolic Tangent vs Sigmoid
- Number of Epochs

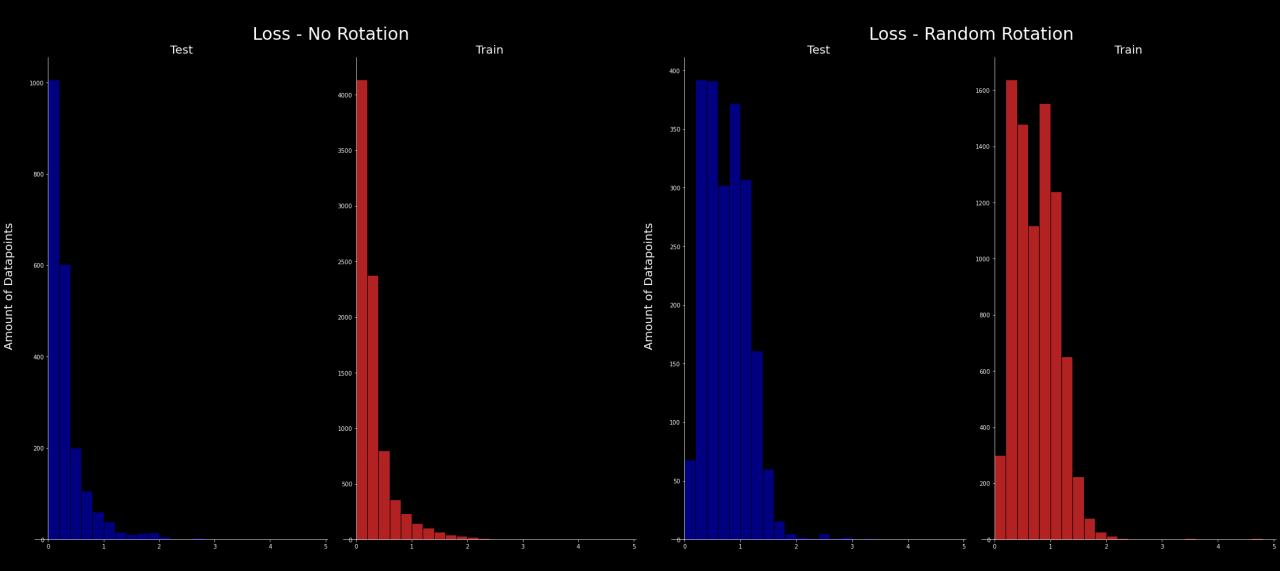


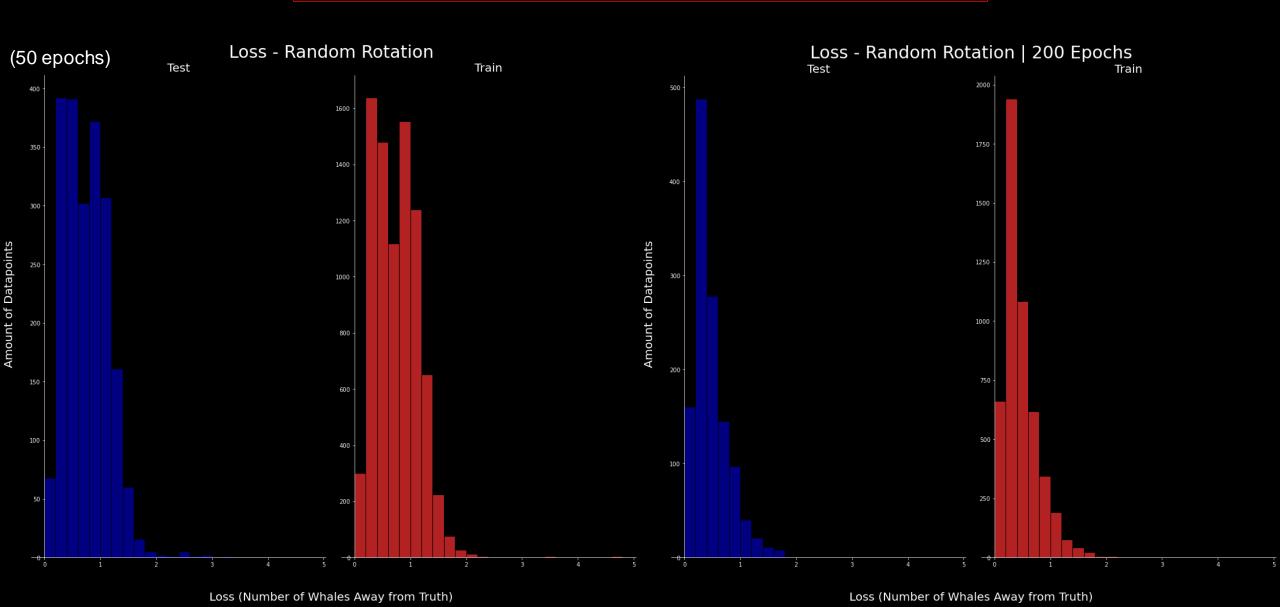


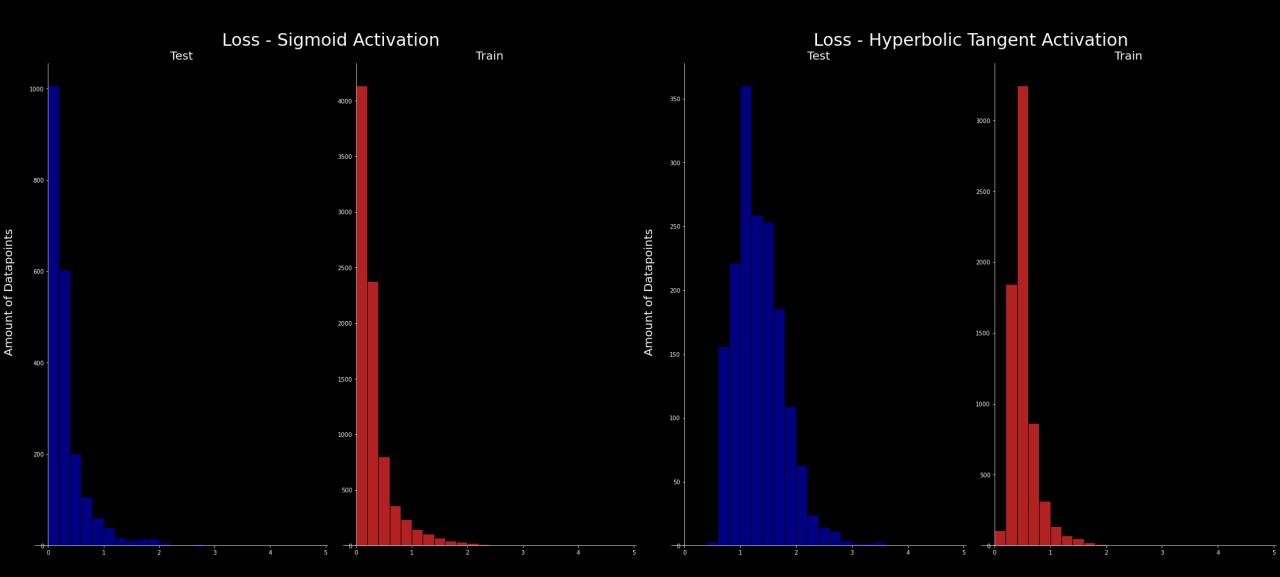
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Stage 3: Spot-Check

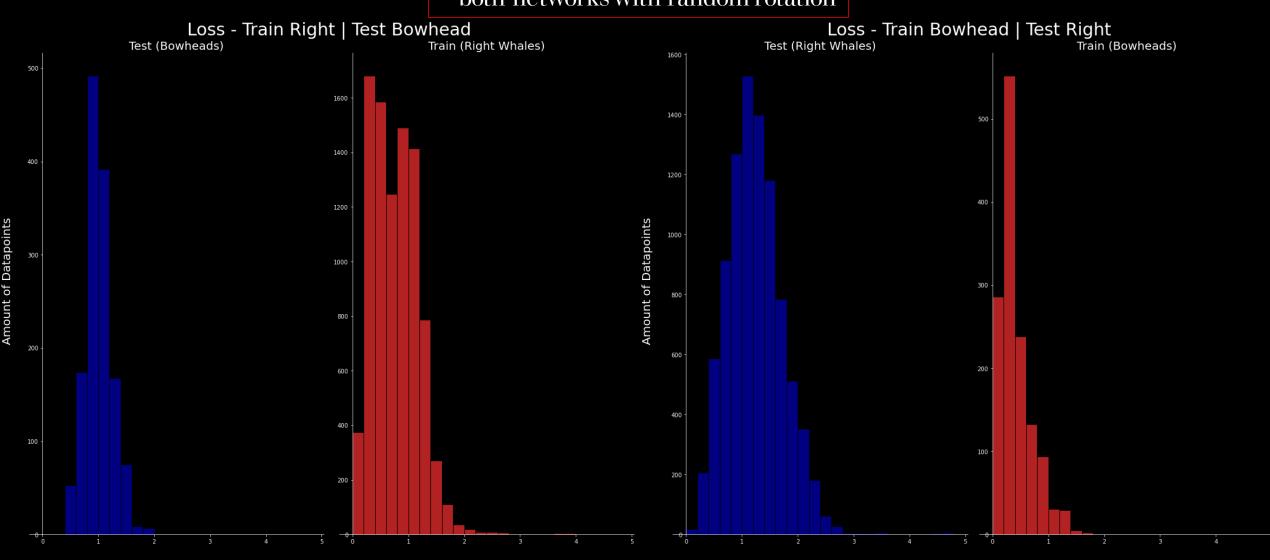








**both networks with random rotation



Stage 5: Grief

- Over 2,000 whales | 3 points per whale | ~3 whales per minute
 - Do it 3 times over
- ~34 Hours Spent *just labeling whales*
- Accounting for human error, review each whale to make the points consistent
- $\overline{ }$ Over 2,000 whales $|\sim 100$ whales reviewed per hour
 - ~20 Hours Spent
 - How many times did Kacey label wrong side?

Stage 6: Acceptance

- Labeling isn't that bad.
- "The code works, I'm 100% confident.
 - ... unless it doesn't." Kacey La
- "And True."
 - while do_loop and True: Sam Gregory

Our Inspirational Leader

