

$$\begin{aligned} \text{ndcg}(\vec{r}, 5) &= \frac{\text{dcg}(\vec{r}, 5)}{\text{dcg}((3, 2, 0, 0, 0)^T, 5)} \\ &= 3.5 / \left(3 + \frac{2}{\lg 2} + \frac{0}{\lg 3} + \frac{0}{\lg 4} + \frac{0}{\lg 5} \right) \\ &= 0.7 \end{aligned}$$