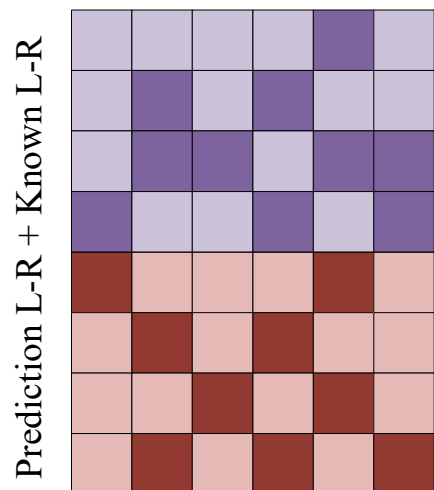
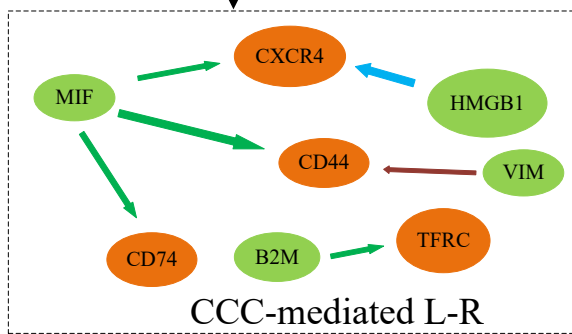


1 L-R filtering



Gene filtering

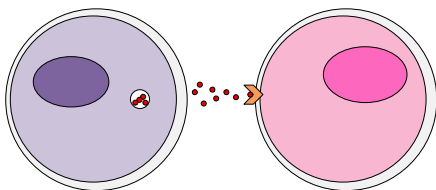


$$Expr_L^{ct_s} = \frac{1}{|ct_s|} \sum_{c \in ct_s} \log(1 + E_c^L)$$

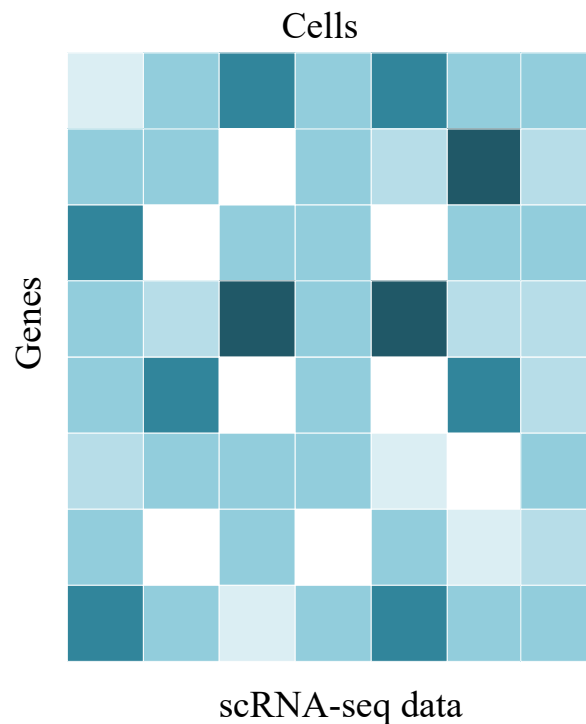
$$Expr_R^{ct_r} = \frac{1}{|ct_r|} \sum_{c \in ct_r} \log(1 + E_c^R)$$

3 CCC scoring

$$Score_{ct_s, ct_r}^{L,R} = \sqrt{Expr_L^{ct_s} \times Expr_R^{ct_r} \times TF_{global}^{ct}}$$

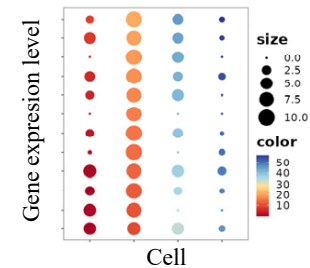


2 TF activity computation

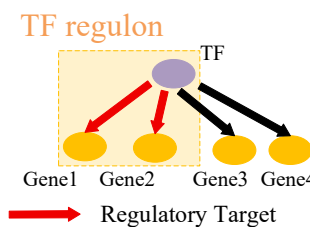


$$TF_{global}^{ct} = \frac{1}{N_{TFs}^{ct} \times N_{cells}^{ct}} \sum_{k=1}^{N_{TFs}^{ct}} \sum_{c=1}^{N_{cells}^{ct}} \log(1 + A_{c,k})$$

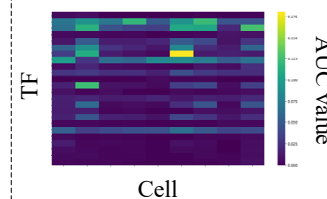
GRNBoost2



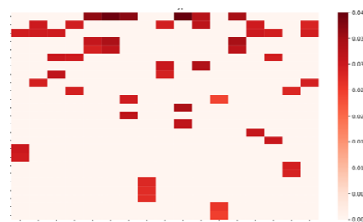
RcisTarget



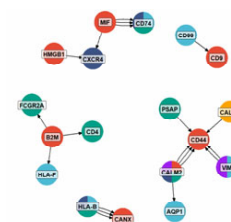
AUCCell



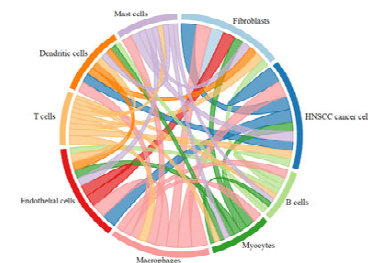
4 CCC visualization



Heatmap view



Network plot



Circos plot