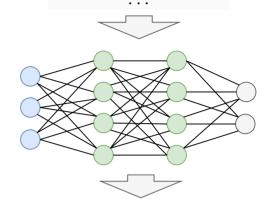
A. Datasets

Types	Cattle	Chicken	Pig	Salmon
ATAC/DNaseSeq	15	17	16	48
CTCF/DMC1	16	16	0	56
Н3К27ас	16	16	16	47
H3K27me3	16	16	16	47
H3K36me3	0	0	0	9
H3K4me1	16	16	16	47
H3K4me3	16	16	16	47
Sum	95	97	80	301

C. Model training

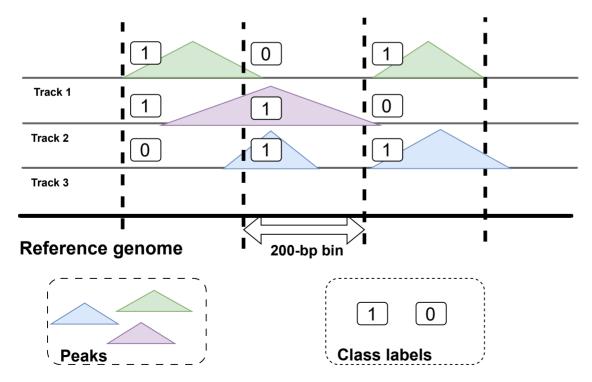
Input DNA sequences

- . . . ATTACGCTGGTACAGAGCTACACTGGGTCGGC...

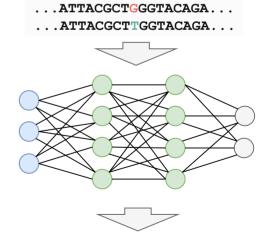


- ...100110001010101...
- ...100110001010101...
- **Chromatin activities**

B. Data labelling scheme



D. Regulatory impact inference



- P(activities|ref sequence)

Variant regulatory impacts