

Supplementary information

A practical guide to studying genome function using single-molecule genomics

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Supplementary Table 1: Software tools for the identification of DNA footprints from single molecule genomics data.

Name	Type	Footprint identification strategy	Reference
Fibertools, Fibertools-FIRE	Statistical pattern detection	Machine learning model for identifying single-molecule and bulk accessible chromatin elements.	^{1,2}
FiberHMM	Statistical pattern detection	Segmentation using a two-state hidden Markov model with length-based classification.	³
FootprintCharter	Statistical pattern detection	Protected segments from homogeneous clusters of similar reads with length-based classification.	⁴
footprintR	Statistical pattern detection	Segments with high correlation-based score compared to provided modification pattern.	⁵
modkit	Statistical pattern detection	Machine learning model-based identification of open chromatin.	⁶
IDLI	Statistical pattern detection	Integrates neural network and hidden Markov models to estimate nucleosome structure.	⁷
HiddenFoot	Model-based	Predicts occupancy using biophysical model based on selected transcription factors' sequence preferences.	⁸
nomeR	Model-based	Bayesian estimation of power spectrum of observed footprint lengths probabilities of occupancy for selected footprint lengths.	⁹

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