

Minimizers

Using windows and minimizers

Rather than using a stride w , use a window w

Within the window, have an order (function)
which picks a single kmer in that window

In this manner, we have:

window w ; kmer size k ; order o

Window:

Minimizer: Select the minimum kmer from a
window according to an order

Window	Selected kmer (minimizer)
GATCGTACAGTCAGTC	ACAGT
ATCGTACAGTCAGTCA	ACAGT
TCGTACAGTCAGTCAA	ACAGT
CGTACAGTCAGTCAAT	ACAGT
GTACAGTCAGTCAATG	ACAGT
TACAGTCAGTCAATGC	ACAGT
ACAGTCAGTCAATGCA	ACAGT
CAGTCAGTCAATGCAT	AATGC
AGTCAGTCAATGCATT	AATGC

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Segment	Minimizer-based bin
ATGCGATATCGTAGGCGTCGATGGAGAGCTAGATCGATCGATCTAAATCC	AGAGCTA
ATGGAGAGCTAGATCGATCGATCTAAATCCCGATCGATTCCGAGCGCGATCAAAGAAATCCC	
<u>AATCCCGATCGATTCCGAGCGCGATCAAAGC</u>	AATCCCG
ATCCCGATCGATTCCGAGCGCGATCAAAGCG	AATCGAT
TCCCGATCGATTCCGAGCGCGAT <u>CAAAGCGCGATAGGCTAGCTAAAGCTAGCA</u>	AAAGCGC