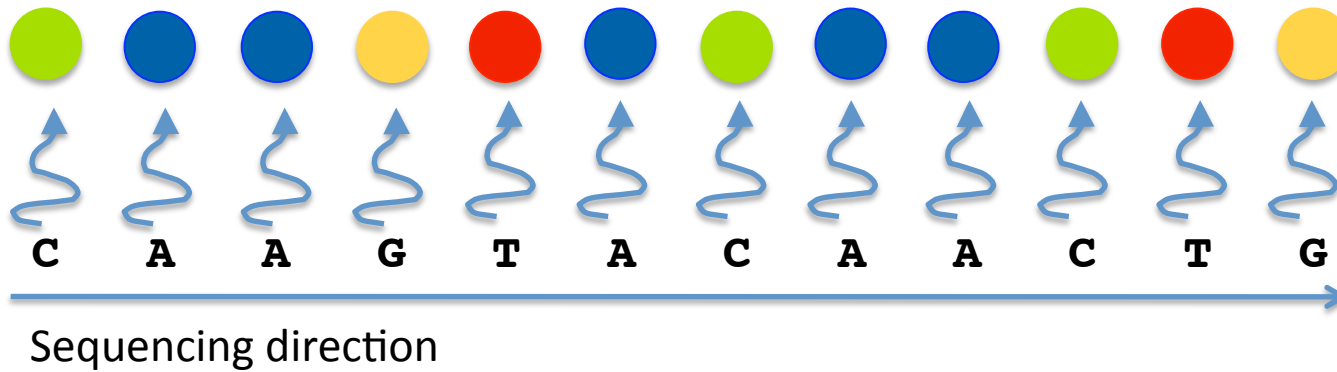






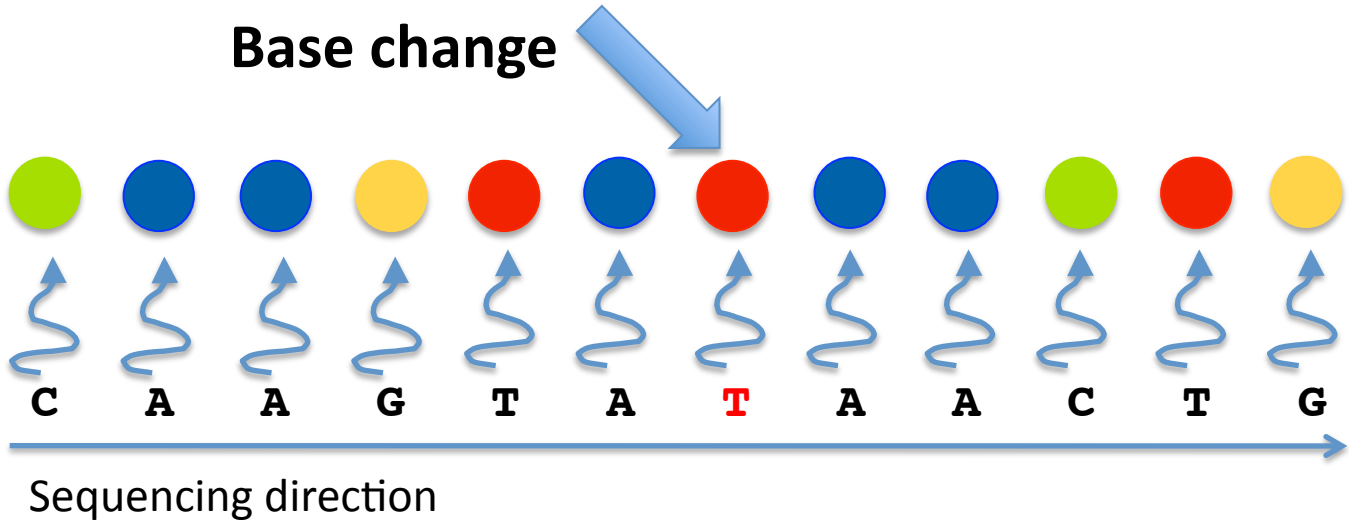
DNA Sequencing

A ●
C ●
G ●
T ●

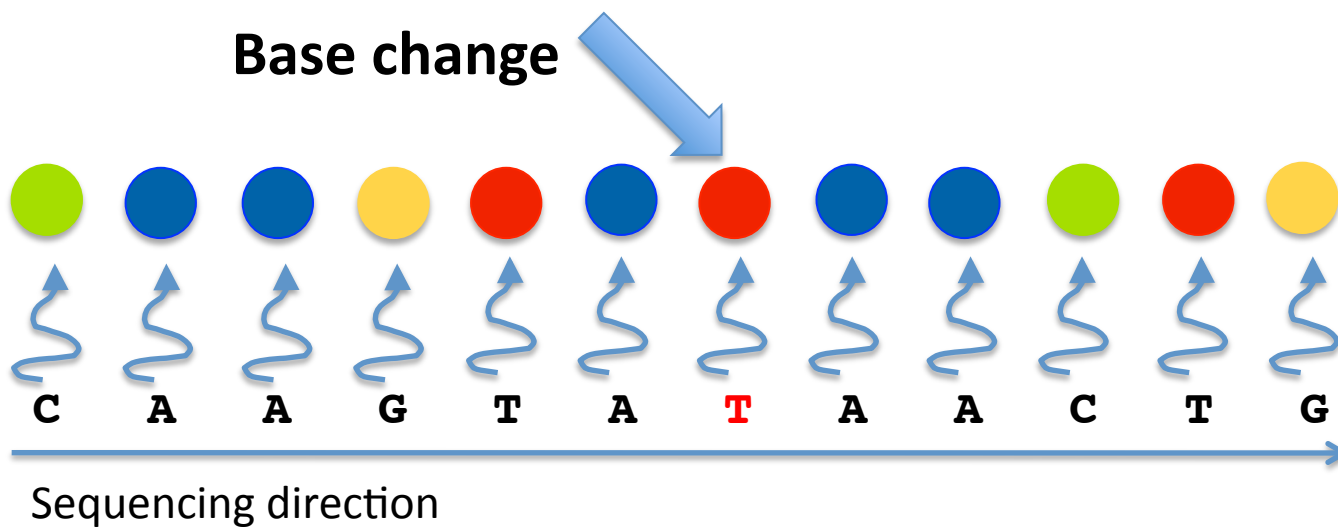
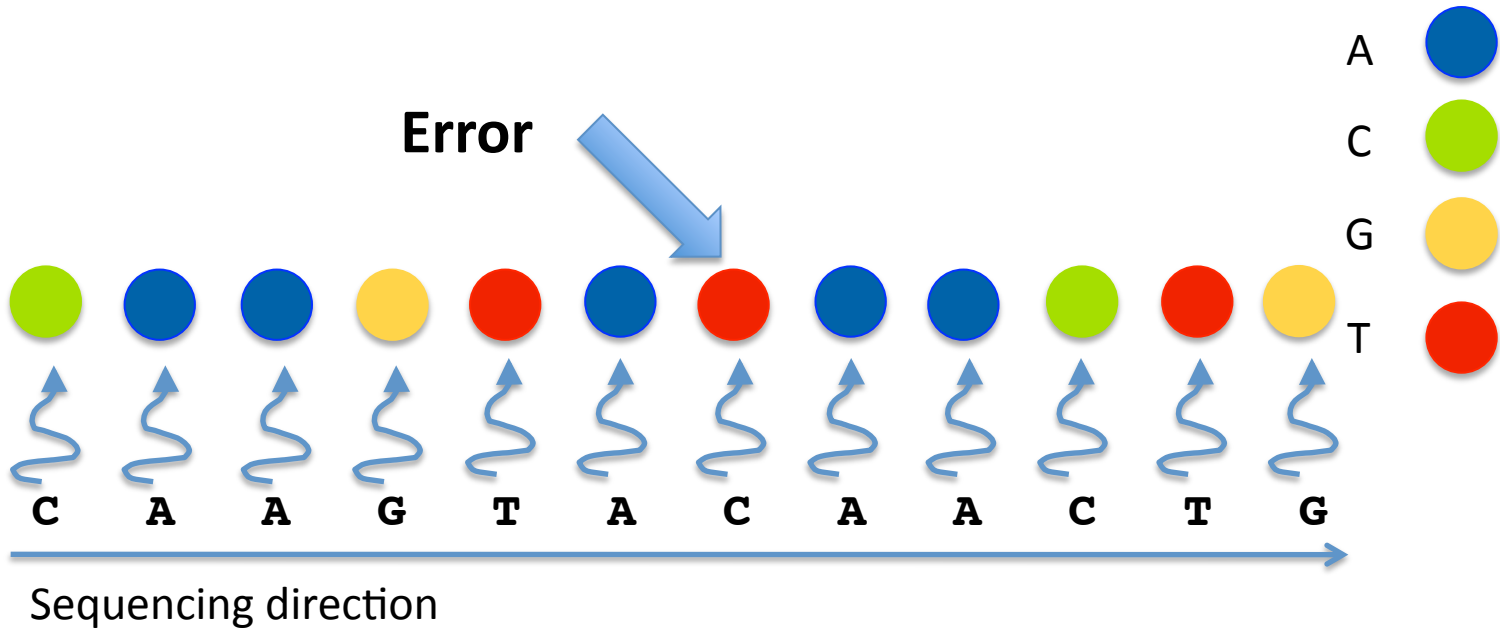


DNA Sequencing

- A 
- C 
- G 
- T 



DNA Sequencing

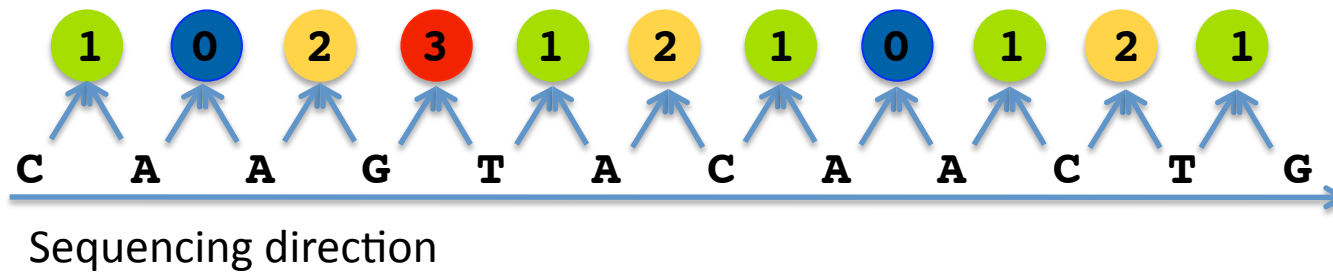


Two-base Encoding

		2 nd Base			
		A	C	G	T
1 st Base	A	0	1	2	3
	C	1	0	3	2
	G	2	3	0	1
	T	3	2	1	0

XOR		A	C	G	T
		00	01	10	11
A	00	00	01	10	11
C	01	01	00	11	10
G	10	10	11	00	01
T	11	11	10	01	00

binary-DNA X-OR

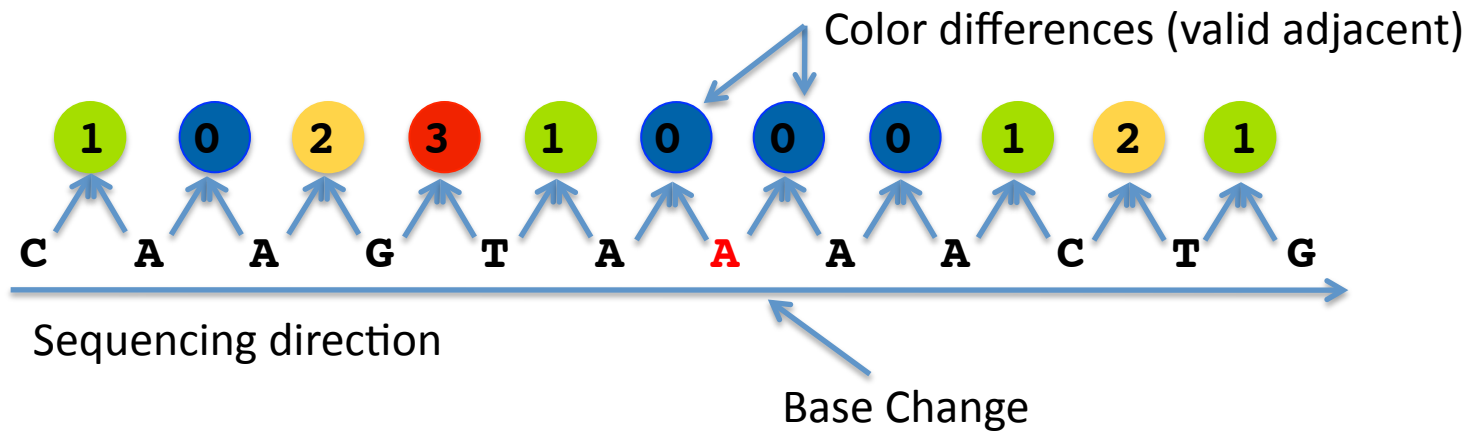


XOR		A	C	G	T
		00	01	10	11
A	00	00	01	10	11
C	01	01	00	11	10
G	10	10	11	00	01
T	11	11	10	01	00

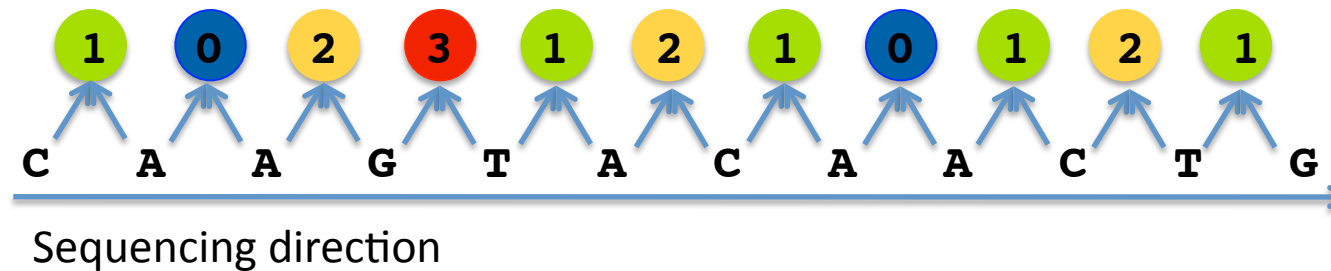
binary-DNA X-OR

		2 nd Base			
		A	C	G	T
1 st Base	A	0	1	2	3
	C	1	0	3	2
	G	2	3	0	1
	T	3	2	1	0

Base Change



Original



XOR		A	C	G	T
		00	01	10	11
A	00	00	01	10	11
C	01	01	00	11	10
G	10	10	11	00	01
T	11	11	10	01	00

binary-DNA X-OR

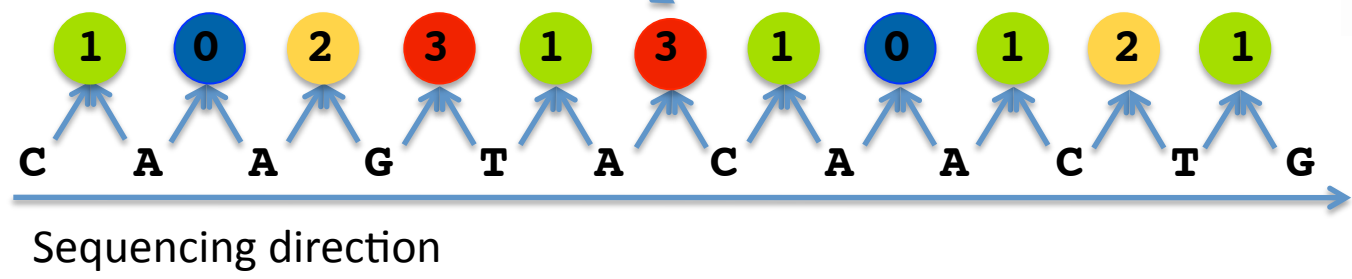
		2 nd Base			
		A	C	G	T
1 st Base	A	0	1	2	3
	C	1	0	3	2
	G	2	3	0	1
	T	3	2	1	0

Incorrectly decoded bases

Color difference

T G G T C A

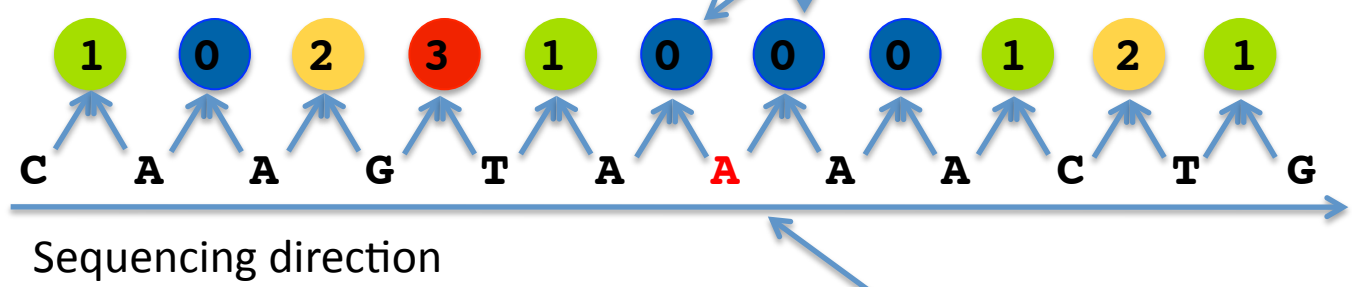
Error



Base Change

Color differences (valid adjacent)

Base Change



Original

