

AACUUGUAAAGCCUAGUGG

A sliding window

One-Hot Encoding

Instance 1

Instance N

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|---|---|---|---|---|---|---|---|---|
| A | ■ | ■ | □ | □ | □ | □ | □ | □ |
| C | □ | □ | ■ | □ | □ | □ | □ | □ |
| G | □ | □ | □ | □ | □ | ■ | □ | □ |
| U | □ | □ | ■ | ■ | □ | ■ | ■ | ■ |

...

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| □ | □ | ■ | □ | □ | ■ | □ | □ | □ |

CNN

Instance 1 features



...

Instance N features



Gated Attention

Instance attention: [Weight 1, ..., Weight N]

$\otimes$

Bag level features



Dense + Sigmoid

Bag level probability