

回复采样&语义聚类

Question 2 How many seconds are there in an hour?

Answer 1: There are **3, 600 seconds** in an hour.

Answer 2: There are **3600 seconds** in an hour.

Answer 3: There are **3, 600 seconds** in an hour.

Answer 4: There are **3600 seconds** in an hour.

Answer 5: There are **3600 seconds** in an hour.

Ground truth: 3600



Question 3 : Where are the Huron Falls?

Answer 1: The Huron Falls ... **Huron Mountains** of **Michigan** , USA.

Answer 2: The Huron Falls ... **Huron River** in **Michigan** , United States.

Answer 3: The Huron Falls ... **Huron River** in **Michigan** , USA.

Answer 4: The Huron Falls ... **Huron River** in **Michigan** , United States.

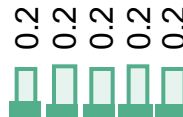
Answer 5: The Huron Falls ... **Huron Mountains** of **Michigan** , ...

Ground truth: Ricketts Glen State Park, Pennsylvania



语义熵 (Probs刻画)

Question 2



Question 3

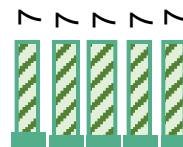


$$p(\mathbf{x}^{(i)} | \mathbf{q}) = \prod_{t=1}^{T_i} p(x_t^{(i)} | x_{<t}^{(i)}, \mathbf{q})$$

$$\tilde{p}(\mathbf{x}^{(i)}) = \frac{p(\mathbf{x}^{(i)} | \mathbf{q})}{\sum_{j=1}^n p(\mathbf{x}^{(j)} | \mathbf{q})}$$

语义能量 (Logits刻画)

Question 2



Question 3



$$E(\mathbf{x}^{(i)}) = \frac{1}{T_i} \sum_{t=1}^{T_i} E_t^{(i)}$$

$$E_{\text{Bolt}}(\mathbb{C}) = \sum_{\mathbf{x}^{(i)} \in \mathbb{C}} E(\mathbf{x}^{(i)})$$