deeplearning.ai

NLP and Word Embeddings

Sentiment classification

Sentiment classification problem

x ⟶ y

The dessert is excellent. ★★★★☆

Service was quite slow. ★★☆☆☆

Good for a quick meal, but nothing special. ★★★☆☆

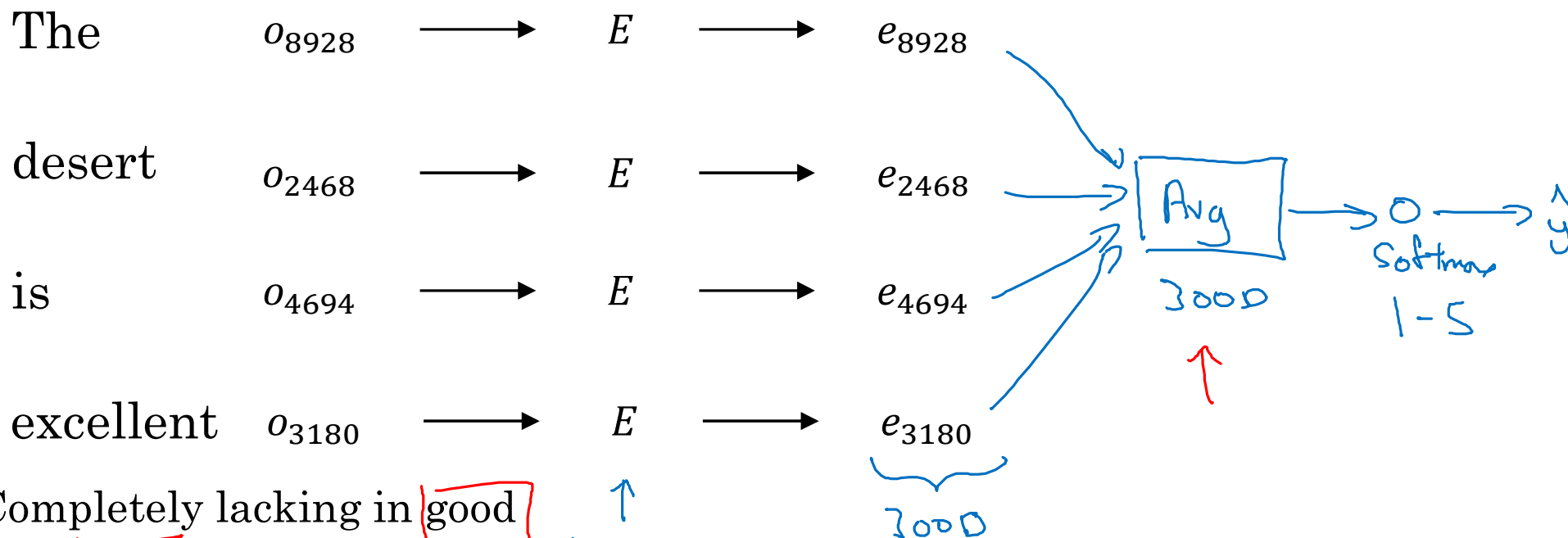Completely lacking in good taste, good service, and good ambience. ★☆☆☆☆

10,000 → 100,000 words

Andrew Ng

Simple sentiment classification model

The   dessert   is   excellent   ★★★★☆

8928   2468   4694   3180

The o_{8928} ⟶ E ⟶ e_{8928}

desert o_{2468} ⟶ E ⟶ e_{2468} Avg ⟶ O ⟶ y

is o_{4694} ⟶ E ⟶ e_{4694} Softmax   1-5

                                   300D

excellent o_{3180} ⟶ E ⟶ e_{3180}

                                            300D

"Completely lacking in good taste, good service, and good ambience."

100 B words

Andrew Ng

RNN for sentiment classification

$$\hat{y}$$

softmax

$$a^{<0>} \rightarrow a^{<1>} \rightarrow a^{<2>} \rightarrow a^{<3>} \rightarrow a^{<4>} \rightarrow \dots \rightarrow a^{<10>}$$

e_{1852} e_{4966} e_{4427} e_{3882} e_{330}

E E E E E

Completely   lacking   in   good   ....   ambience

absent   of

many-to-one   "not good"

Andrew Ng