

multiple-aspect  
trajectory  
representation  $T$

Hotel  
(48.8643, 2.3345)  
★★★★  
\$\$\$  
Mon, 7am  
Rainy weather



Museum  
(48.8606, 2.3380)  
★★★★  
\$\$\$  
Mon, 8am  
Rainy weather



...



Cafe  
(48.8609, 2.3494)  
★★★★  
\$\$\$  
Mon, 8pm  
Cloudy weather

Trajectory  
encoding

One-hot/  
geohash encoding

Embedding  
initialization

Embedding  
method  
(e.g. random,  
autoencoder,  
CBOW)

Recurrent  
component

LSTM

LSTM

...

LSTM

LSTM

Trajectory  
classification

Fully connected layer with Softmax activation

Class probability distribution

label( $T$ )

