ANLP Assignment 1

October 12, 2015

Abstract

$$
\begin{aligned}
PP_M(\vec{w}) &= 2^{H_M(\vec{w})} \\
&= 2^{-\frac{1}{n}\log_2 P_M(\vec{w})} \\
&= 2^{\log_2 P_M(\vec{w})^{-\frac{1}{n}}} \\
&= P_M(\vec{w})^{-\frac{1}{n}} \\
&\approx \prod_{i=1}^{n} P(w_n|w_{n-1}, w_{n-2})^{-\frac{1}{n}} \\
&= \sqrt[6]{\frac{1}{0.2 * 0.7 * 0.6 * 0.25 * 0.5 * 0.1}} \\
&\approx 3.1367
\end{aligned}
\tag{1}
$$

w_{-1} and w_0 refer to the first two '[' character