

# **Analysis and Prediction of User Behaviour in a Museum Environment**

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## **Abstract**

I am a student at the University of Melbourne, my supervisors are Timothy Baldwin and Steven Bird. The full submission will be submitted later, abstract follows.

The prolific distribution and continued evolution of portable technology has had a marked effect of how we as human beings live our lives. But the inter-relation between the technological virtual environment and the physical space where we live is less prominent. Using technology such as mobile phones and other portable handheld devices, we can bring information about the surrounding environment directly to the people inhabiting this environment; us. Building a predictive model allows us to anticipate future actions the person may take. This can be then used as a navigation aid, planning for future paths, or modifying any information presented to the user to take into account their predisposition towards elements of the environment. By using a person's history within the environment, and information associated with each item in the history, accurate predictions can be made as to what the person will visit in the future. One can consider the elements in the person's history as a vocabulary of previsited locations, and can hence use language modelling techniques to predict future locations. This study compares and analyses different methods of path prediction including, Naive Bayes, document similarity, visitor feedback and different measures of lexical similarity.