Intelligent Tourist Travel Planner

Liam Attard [0299300L]
Department of Artificial Intelligence
University of Malta
liam.attard.18@um.edu.mt

***Abstract*—**
***Index Terms*—tourism,itinerary, user-profiling.**

I. Introduction

A. Problem Definition

Producing an itinerary before a trip can be a demanding task which requires a substantial amount of research. Many times people rely on travel books, individual travel blogs and online websites to form a holiday plan, but these are not always tailored according to the traveller's preferences and opinions [1].

An adequate automated trip planner application would consist of two parts,

1) the retrieval of user preferences
2) the generation of a custom itinerary

Numerous systems are available and therefore building a working prototype is both possible and feasible [1]–[12]. Although these systems automate the process of producing the itinerary, they require a lot of end-user data and preferences to form a personalised itinerary. Can the user preference gathering be automated?

Given the amount of information a single user holds online, it is possible to automate and help the process of gathering personal preferences [13]. A deep learning model could be trained to classify a person's social media profile to determine what the user wants from a trip. This information alongside other parameters such as the user's budget and trip length could give out a very accurate personalised holiday plan.

B. Motivation

The immense amount of data generated by each user online [14] alongside the benefits that a tourist recommender system brings were the two main motivators behind this project. If a user allows the system to gather preferences based on his social media profile and provides a small number of additional preferences such as the budget and destination, a personalised itinerary could be generated automatically.

C. Why the Problem is non-trivial

II. Background Research and Literature Review

A number of works both on image classification and on automatic trip itinerary generation have been carried out throughout the years.

A. User Profiling/ Travel Pref.

B. Automatic Trip Planners

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