

國立臺灣大學管理學院資訊管理學系

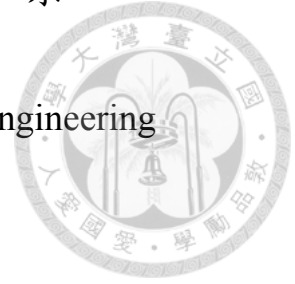
碩士論文計畫提案書

Department of Computer Science and Information Engineering

College of Management

National Taiwan University

Proposal for Master Thesis



影像中使用者感興趣區域偵測之資料集

A Benchmark for Region-of-Interest Detection in Images

黃文鴻

Wen-Hong Huang

指導教授：林永松博士

Advisor: Frank Yeong-Sung Lin, Ph.D.

中華民國 96 年 6 月

June, 2007





摘要

共享經濟是隨著網路以及行動裝置普及下逐漸興起的熱潮，傳統的計程車與共乘服務在共享經濟的風潮下產生出新的商業模式，不同於以往使用者必須到目的地才能知道價錢，或是只能針對特定路線如通勤、通學等才容易有共乘機會；透過線上叫車服務，使用者除了可以事先知道價錢，還可以透過共乘配對服務，自動配對有相近路線的乘客，共同分攤車資，提供使用者更便宜經濟的選擇。

目前的線上共乘配對服務，分為佈告欄式媒合與自動配對，佈告欄式為課程在共乘平台張貼共乘需求，由平台使用者自行媒合；而自動配對為共乘平台針對目前行徑中或是配對中的乘客透過運算，找尋最適合的路線與乘客。自動配對的共乘服務中，往往需要多繞路以同時滿足不同乘客間的載運需求，如何讓使用者之間繞路多寡符合公平性，便是重要的挑戰。本研究考慮共享經濟中共乘服務的多乘客路線規劃問題，將乘客可接受的抵達時間、繞多少路的可接受程度，以及載客的優先順序納入考量，以最小最大化各乘客所多繞的路徑為目標式，透過拉格朗日鬆弛法以取得最佳解。

關鍵字： 共乘、共享經濟、車輛路徑問題、動態車輛路線、拉格朗日鬆弛法





Abstract

This thesis presents a benchmark for region of interest (ROI) detection. ROI detection has many useful applications and many algorithms have been proposed to automatically detect ROIs. Unfortunately, due to the lack of benchmarks, these methods were often tested on small data sets that are not available to others, making fair comparisons of these methods difficult. Examples from many fields have shown that repeatable experiments using published benchmarks are crucial to the fast advancement of the fields. To fill the gap, this thesis presents our design for a collaborative game, called Photo-shoot, to collect human ROI annotations for constructing an ROI benchmark. With this game, we have gathered a large number of annotations and fused them into aggregated ROI models. We use these models to evaluate five ROI detection algorithms quantitatively. Furthermore, by using the benchmark as training data, learning-based ROI detection algorithms become viable.

Keywords: keyword

Contents

摘要	iii
Abstract	v
1 Introduction	1
1.1 Background	1
1.2 Motivation	1
1.3 Thesis Organization	1
2 Literature Review	3
Bibliography	5

List of Figures

List of Tables



Chapter 1

Introduction

1.1 Background

1.2 Motivation

1.3 Thesis Organization





Chapter 2

Literature Review



Bibliography

