HCMUS at the NTCIR-14 Lifelog-3 Task

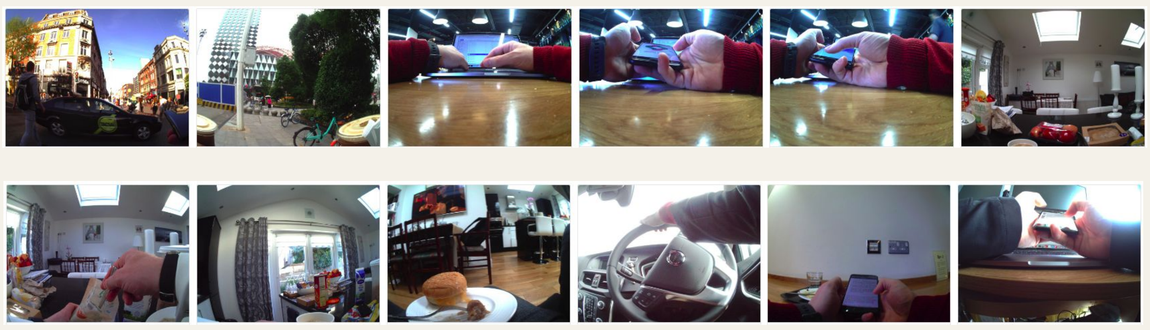
Nguyen-Khang Le[1], Dieu-Hien Nguyen[1],
Trung-Hieu Hoang[1], Thanh-An Nguyen[1], Thanh-Dat Truong[1], Duy-Tung Dinh[1], Quoc-An Luong[1], Viet-Khoa Vo-Ho[1]
Vinh-Tiep Nguyen[2], Minh-Triet Tran[1]

[1] University of Science, VNU-HCM, Ho Chi Minh City, Vietnam
[2] University of Information Technology, VNU-HCM, Vietnam.

lnkhang@selab.hcmus.edu.vn

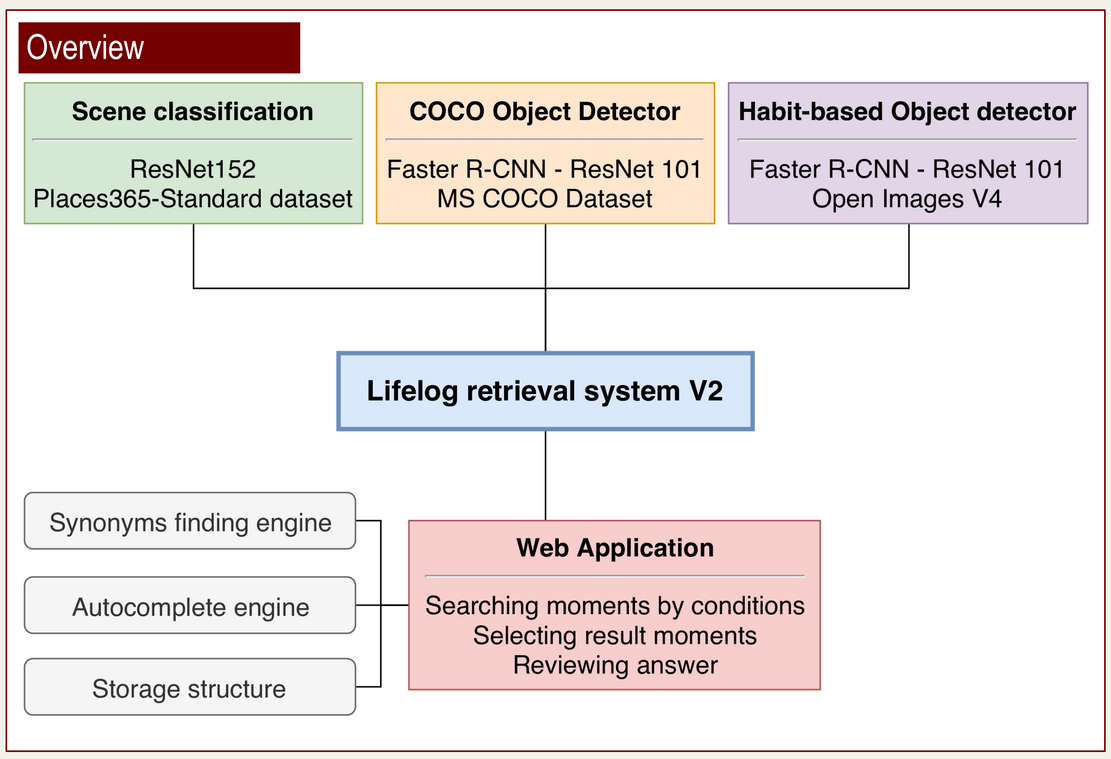
INTRODUCTION

Lifelog-3 was the third instance of the lifelog task at NTCIR. At NTCIR-14, the Lifelog-3 task explored three different lifelog data access related challenges. One of the three challenges is **Lifelog Semantic Access sub-Task (LSAT)** which aims to explore search and retrieval from Lifelogs. In this subtask, the participants had to retrieve a number of specific moments in a lifelogger's life in response to a query topic. Our proposed system solves this subtask by providing two main features: **Data Processing** and **User Interaction**. For Data Processing, we employ models in object detection and scene classification to annotate the lifelog dataset with meaningful metadata. For User Interaction, we aim to design and provide a friendly user interface that enables novice users to interact with the queries and select the result data. In the **NTCIR-14 official results**, our system has the **highest performance**.



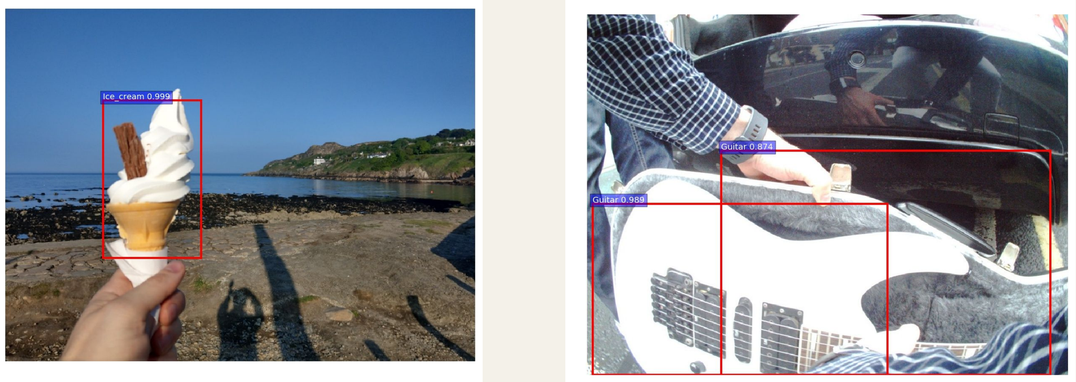
PROPOSED SYSTEM

Overview



Scene classification

Habit-based detector



RESULTS

The official results of the LSAT

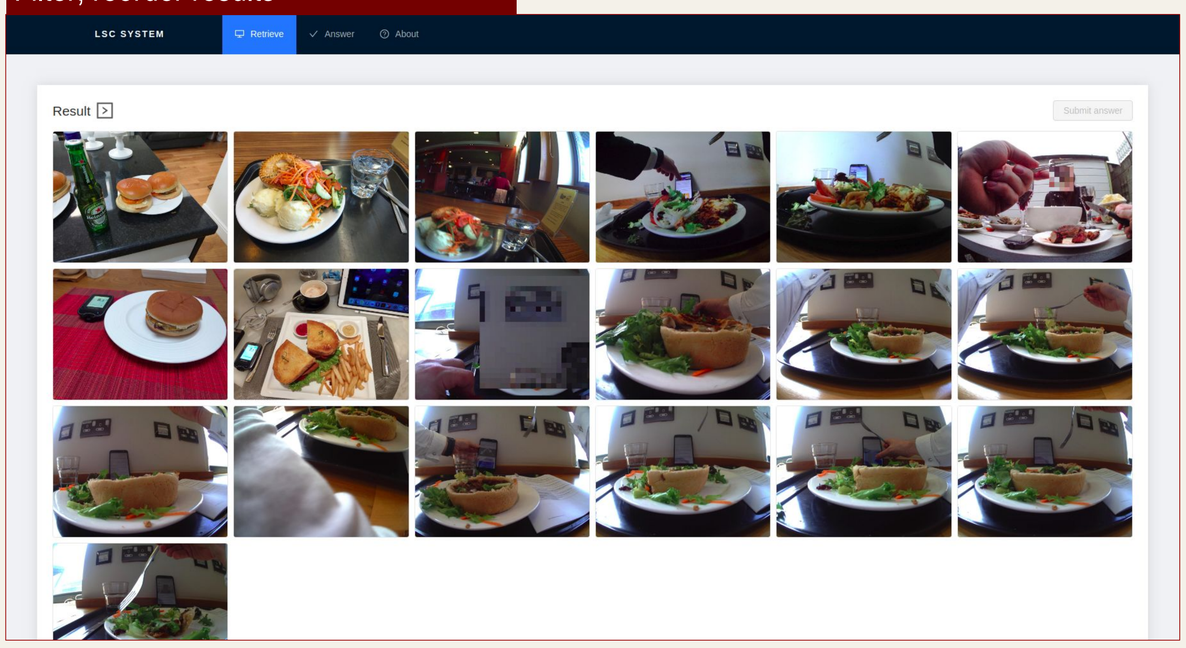
Group ID	Run ID	Approach	MAP	P@10	RelRet
NTU	NTU-Run1	Interactive	0.0632	0.2375	293
NTU	NTU-Run2	Interactive	0.1108	0.3750	464
NTU	NTU-Run3	Interactive	0.1657	0.6833	407
DCU	DCU-Run1	Interactive	0.0724	0.1917	556
DCU	DCU-Run2	Interactive	0.1274	0.2292	1094
HCMUS	**HCMUS-Run1**	**Interactive**	**0.3993**	**0.7917**	**1444**
QUIK	QUIK-Run1	Automatic	0.0454	0.1958	232
QUIK	QUIK-Run2	Automatic	0.0454	0.1875	232

Our proposed system has the highest performance in NTCIR-14 result

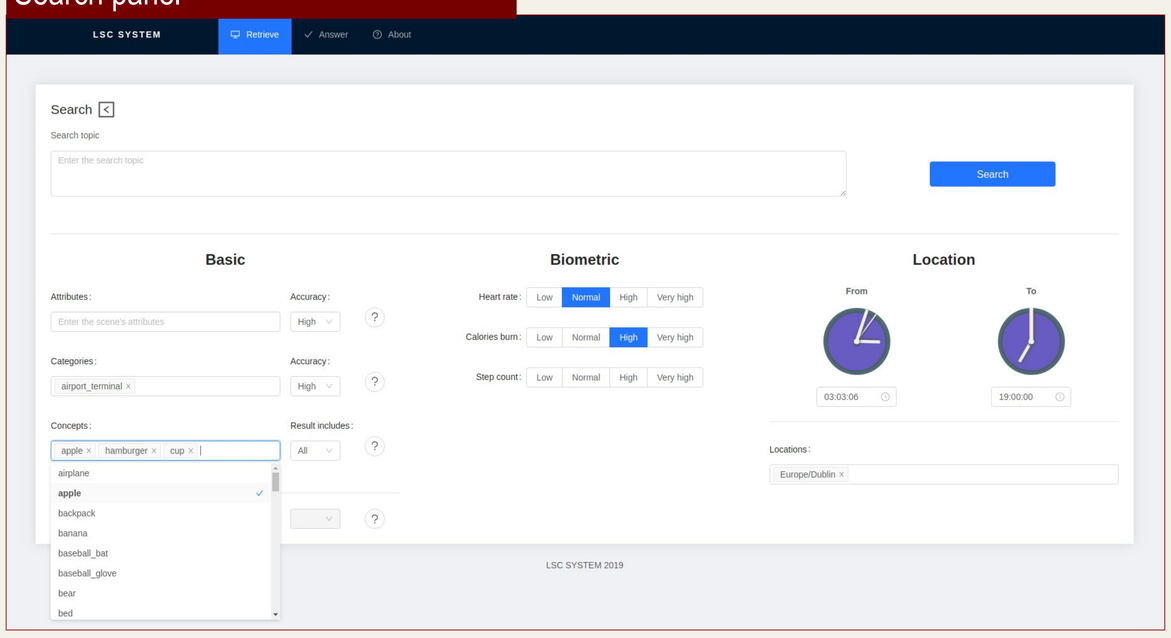
USER INTERACTION

Sequence view of moments

Filter, reorder results



Search panel



CONCLUSION AND FUTURE WORKS

- There are still some aspects that our system needs to improve. Theuser still needs to picture the moments to decide what scene category the imagesshould be, and what concepts should be in the images.
- In the future works, we will look into the aspect of natural language semanticsto give our system the ability to understand the topic search and suggest morerelevant inputs for the user.

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