

國立中正大學數學系
暨應用數學碩士班、統計科學碩士班
學術演講

Prediction of human looking behavior using interest-based image representations

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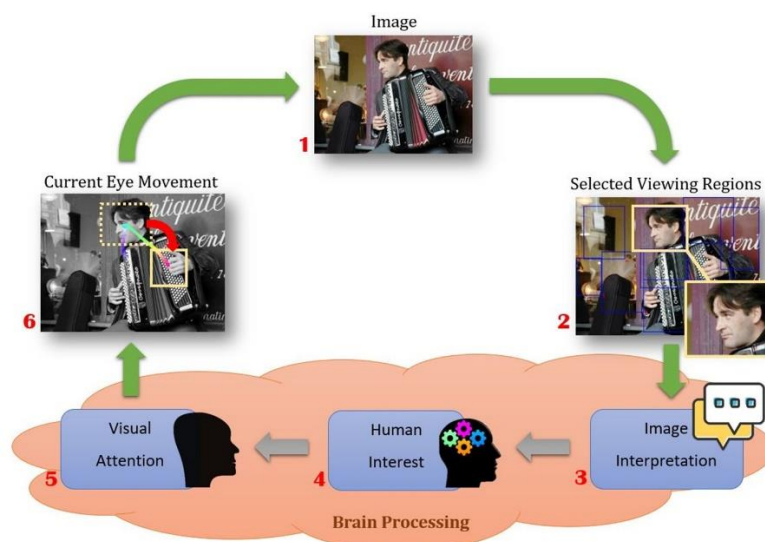
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Abstract

In this talk, I focused on the flow between the visual stimulus and interpretation with the observable eye movement data involved. We aim to simulate the overall visual information flow as a user model and seek the connection of how the user model can associate with machine learning and human-computer interaction. By using the user model, we are able to provide insights on designing intelligent interfaces for filtering and collecting useful information. The user model can also provide improvement to the machine learning methods. We discuss this visual information flow and discriminate our research projects into these three themes: intelligent interface for understanding user modeling, model-driven machine learning, and applications of the learned user model.

Based on the human eye movement on images, we introduce the concept of Interest-based Regions, which indicates regions that get more attention or interest while viewing an image. This innovative representation method acts as critical information (hidden states) in the user model between input information and output behavior. By using this representation, we present the feasibility of how to collect further interpretation, how to connect with the viewing behavior updates, and how to use in real-life applications such as non-invasive aid on diagnosing psychological symptoms.



日期: 113年3月13日(星期三) 16:00~17:00
地點: 本校數學館 527 教室 (嘉義縣民雄鄉大學路 168 號)

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