Research Activities Report - 2022 Overseas Research Experience Program -



Research Topic	Research on Acquisition and Validation of Unconscious Interest based on Gaze Estimation using a See-Through HMD	Faculty of Information Science
Host University	BISITE Research Group - University of Salamanca / Salamanca / Spain	Department of Media Science
Duration	From November 1 2022 to January 31 2023	Alok Shrestha

Summary of the Research Activities

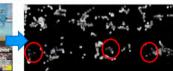
In Spain, we carried out the development of the research that we had been doing until the summer in Japan. My research aims to use gaze recognition techniques to acquire unconscious interests that we are not yet aware of. Specifically, I use advertisements as my target object. Until the summer, I used only the dynamic information of the maximum time and number of times to stop at an advertisement, which are dependent on the person using the see-through HMD, for the analysis. As a new approach, we conducted research by incorporating static information



called saliency map, which depends only on the advertisement and the field of view, in addition to dynamic information called heatmap. As a result, the system proposal received about 1.67 times more support than the random proposal. However, the Mann-Whitney U-test did not provide statistical support. I believe this is due to the fact that I conducted the experiment before Christmas, when many of the Spanish students went back to their hometowns and only 7 students were able to conduct the experiment. Therefore, I would like to increase the number of students in the experiment in the future.



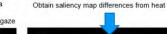




Saliency mapping of the field of view captured by a see-through HMD Heat mapping from 3D coordinates obtained from gaze

lasking of the original field of view image with

moderate opening and closing processing





Binarization in the range specified in the prior experiment

About Lab and Environment

The laboratory is located in the center of Salamanca. I go there at 9:00 a.m., and we always go to a nearby cafe at 11:00 a.m. Everyone goes to a nearby cafe for a break, and by 2:00 p.m., there is no one left in the lab. Everyone is very kind and invites me to play soccer or go hiking.



<u>指導教員講評</u>

研究室の仲間に歓迎され、ラボメンバー と研究についてディスカッションしたり、 時には遊んだりと、充実した期間だった ようです。 指導教員氏名:大井翔