

ADAPT Undergraduate Internship Programme 2017

PROJECT DESCRIPTION

<i>Institution/Team:</i>	DCU, Theme D	
<i>Project Title:</i>	Using Biometric Response to Locate Personally Interesting or Engaging Digital Content	
<i>Suitable for students who are studying in the following areas:</i>	Suitable for students who are studying Computing, Computer Science or related disciplines with knowledge of Java.	
<i>Skills needed:</i>	<p>Suitable candidates need to have a keen interest in working on a research project, be methodical, and have a knowledge of Java programming.</p> <p>An interest in search technologies and information retrieval is desirable. As is interest in working with new technologies (see below project description for further details).</p>	
<i>Project Description:</i>	<p>Biometric response provides a measure of an individual's arousal levels or engagement with a life situation, e.g. a person's biometric response would be different when their football team scored the winning game of a match than when they lost a match. This biometric response can be measured using small wearable computing devices.</p> <p>Our research group we are investigating using biometric response to, among other things, find the computer files and web pages a person is most interested in by measuring their biometric response when viewing the files and web pages. To do this we look at how a person's biometric response increases and decreases when viewing different files/web pages, and for patterns in these variations in biometric response. We now want to take these investigations to the next level. This project will contribute to our new investigations. Specifically, the intern will contribute to designing new experiments, setting up experiment subjects with the biometric devices, and analysing the results of the experiments. Java coding will be involved in this project.</p>	
<i>The Role of the student & benefits gained from participation in this project:¹</i>	<p>The student will carry out research in area of information retrieval or search as described in the above project description, with guidance from members of the research group. This will consist of collecting and organising experiment data, and testing it to compare different techniques. As part of this work the student will learn how biometric sensing devices work. Java programming will also be required.</p> <p>The student will gain the opportunity to learn about information retrieval and cutting edge research in using biometric devices and biometric response. They will also learn how research is conducted and gain first-hand experience of working within a dynamic research group. Depending on the project outcomes it is also foreseen that the project will result in a research publication, of which the student would be a co-author.</p>	
<i>Who will be working with you?</i>	The student will be co-supervised by Dr Liadh Kelly and Professor Gareth Jones, the team leader of the group.	
<i>Short description of the group:</i>	The information retrieval group within the ADAPT centre at DCU currently has 9 members: 6 PhD students, 2 postdoctoral researchers and the Principal Investigator.	
<i>Recommended Reading Material:</i>	Kelly, Liadh and Jones, Gareth J.F. (2010) Biometric response as a source of query independent scoring in lifelog retrieval. In: ECIR 2010 - 32nd European Conference on Information Retrieval, 28-31 March 2010, Milton Keynes, UK. ISBN 978-3-642-12274-3	
<i>Other information:</i>		
<i>For further details on this project please contact:</i>	Name: Phone: E-Mail: Website:	Liadh Kelly Liadh.Kelly@dcu.ie www.computing.dcu.ie/~lkelly/

¹ This is an initial description of the role of the student and it is liable to change following discussions between the investigators and the student.

