2019 Undergraduate Summer Research Internship in Canada

About the Mitacs Globalink Research Internship:

- Are you an undergraduate student from Australia, Brazil, France, China, Germany, India, Mexico, Saudi Arabia, Tunisia, or Ukraine interested in exploring your field of study in Canada?
- Are you interested in pursuing a research internship (up to 12 weeks) in Canada in summer 2019?
- Check out the Mitacs Globalink Research Internship website to submit your application: https://www.mitacs.ca/en/programs/globalink/globalink-research-internship
- **Application Deadline: September 19, 2018**

About Professor Umar Ruhi's Research Project:

Professor Umar Ruhi at the University of Ottawa has 2 undergraduate research intern openings for the project described below. If you have specific questions about this project, you can contact him directly at: umar.ruhi@uottawa.ca

Project Title:

User Experience Evaluation of End-User Development Technologies

Project Description:

Have you ever created mathematical models in Excel? How about creating a website or a wiki using a graphical user interface? If you answered yes to either of these questions, then you have practiced End-User Development (EUD). As an emerging paradigm in personal and organizational computing, the practice of End-User Development (EUD) refers to methods, tools, and techniques that allow non-IT professional end-users to create, modify or adapt their own software artifacts. Many lightweight development toolkits and low-code development platforms are currently available to help people adopt EUD. Some examples include cloud application integration tools such as Microsoft Flow, IFTTT (If This Then That), Zoho Flow, Zapier etc., and more sophisticated enterprise software suites such as OutSystems and Servoy. The major value proposition of these EUD environments is that they enable accelerated development and delivery of software applications. However, the effectiveness of these technologies from an end-user perspective has not been adequately investigated in the academic literature. Our research aims to address this gap. Through an empirical investigation, we aim to conduct a user-experience (UX) evaluation of EUD technologies in order to ascertain the utility, usability, aesthetics, and value of these technologies to the end-user. In terms of scope, we will evaluate various UX dimensions of EUD offerings, such as visual design, information design, interface design and interaction design. With respect to empirical procedures, we plan to utilize a combination of evaluation procedures including user task analysis, think-aloud experiments, and individual interviews with end-users. The overall objective of this research is to identify the key UX dimensions that can potentially affect the adoption and continued use of EUD technologies. Results from this research will potentially help improve the design and development of EUD technologies and contribute to the body of knowledge in the field of Human-Computer Interaction (HCI).

Student Role:

The research intern will work closely with the professor and other students in the research team to:

i) Conduct systematic literature reviews in the area of End-User Development (EUD) and User Experience (UX);

ii) Explore, learn and document the features and functions of different EUD technologies;

iii) Develop use-case scenarios and testing scripts for performing self-guided and user-centered UX evaluations for selected EUD technologies;

iv) Conduct a self-guided heuristic usability evaluation of selected EUD technologies;

v) Plan, develop, and conduct lab-based UX testing with different segments of users including students and non-IT business professionals;

vi) Support the analysis and reporting of results and findings from the UX evaluations;

vii) Participate in the authorship of at least one peer-reviewed conference paper based on the activities and outcomes of the internship engagement.

Required Skills:

This opportunity is suitable for undergraduate students with a background in Computer Science, Information Technology, Information Science, or Management Information Systems. Ideally, the student should have some past experience with End-User Development tools (such as those mentioned in the project description) either through their studies or through personal interest. Students should also have completed coursework in i) Systems Analysis and Design; and ii) Web Design or Web Applications. Additional coursework in Human Computer Interaction and knowledge of Usability Engineering or User Experience Design would be an asset.

Faculty Supervisor:

Professor Umar Ruhi conducts research in the area of Information Systems and Human Behavior, and his research programs explore various opportunities and challenges for end-users in their personal use of information and communication technologies (ICTs), as well as the interplay between information systems and individual workplace behaviors. Within this domain, he has been conducting research on various topics such as End-User Development (EUD), Enterprise Gamification, and IT Consumerization. Dr. Ruhi's research addresses both technological as well as sociological factors that affect the initial adoption and continued long-term use of technology applications by users and organizations. More information about Professor Umar Ruhi is available through his website: http://www.umar.biz