

**MANAGEMENT OF USER PERSONA UPDATES BY  
PREDICTING USER BEHAVIOURAL PATTERNS**

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Degree of Master of Science

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February 2019

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## **DECLARATION**

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.....  
Buddhika Amila Rathnayaka Date

The above candidate has carried out research for the Masters thesis under my supervision.

.....  
Dr. G.I.U.S. Perera Date

## **ABSTRACT**

User centred design equipped persona concept to provide better and more acceptable user interfaces. This persona concept based on user research which collects information about the user's goals binds with the product. Due to user bases changing without prior notice, personas are vulnerable to become outdated or not productive without any notice. Avoid these situations, need to revise personas with time.

Providing a mechanism to find a point of persona updating is the focus of this research. Predicting user and persona relationship in periodically and analyse user behaviour against personas provide statistics to finding a persona updating point.

Neural network model is created and trained using the data that use for persona creation for predict personas mapped with the users periodically. According to these statistics, it is possible to find the consistency of user's stickiness to persona and whether the system needs a persona revising.

If system owners or maintainers do not monitor the changes of the user base, it is very difficult to identify whether the current status of personas are outdated or not. If there is no mechanism to monitor user base, then persona revising happens unnecessarily. The proposed method for find persona updating point help to manage the frequency of persona updates with avoiding situations that system using outdated personas.

Considered data set within the research shows that 71.33% of persona user consistency. This figure generally shows that the majority of users well served by personas and can consider there is no need to updates personas at this time. It is possible that stakeholders of the product have higher needs of providing highly effective user interfaces with the product, situation (e.g., consistency rate above 80%) like this there is a persona application for the application considered in the product.

Keywords: Neural network, User cantered design, User persona, User persona updates

## **ACKNOWLEDGEMENT**

I would like to thank my supervisor, Dr Indika Perera for the supervision, for providing right leads and guidance and for helpful advice given throughout to make this research a success. My sincere appreciation goes to my family for the continuous support and motivation given to make this thesis a success. Last I also thank my friends and staff of the department of computer science and engineering - the University of Moratuwa who supported me in this whole effort.

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## **LIST OF ABBREVIATIONS**

HCI	Human Computer Interaction
PoC	Proof of Concept
UCD	User Centred Design