

**EVALUATING AWARENESS LEVEL TOWARDS SMARTPHONE  
SECURITY THREATS AND SECURITY FEATURES AMONG ZAWIA  
UNIVERSITY STUDENTS**

**TAHANI. T. AHMED. HAMOMA**

**UNIVERSITI SAINS ISLAM MALAYSIA**

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**Thesis Submitted in fulfillment of the requirements for the degree of  
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INFORMATION SECURITY AND ASSURANCE**

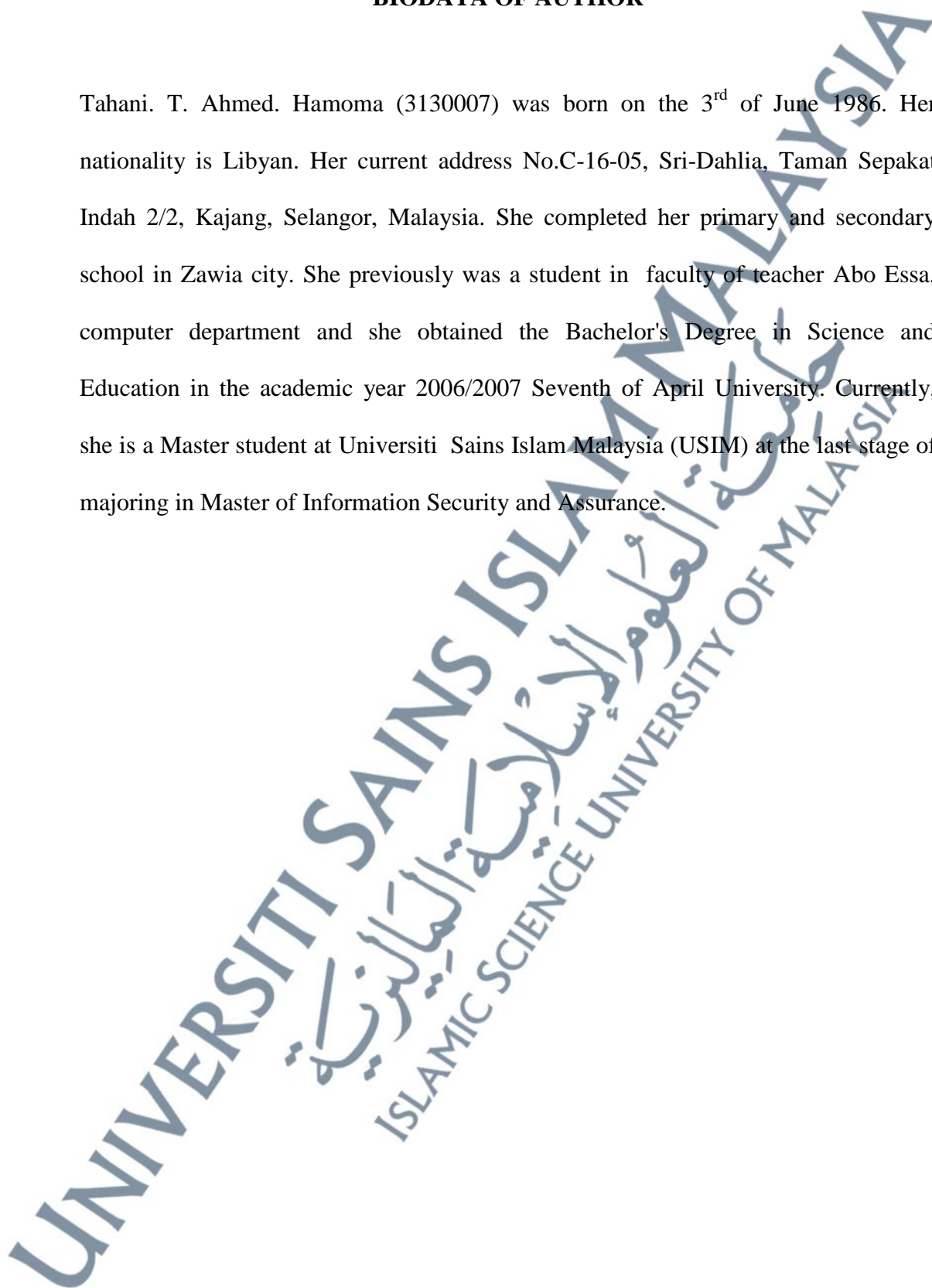
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## ABSTRACT

Increasing the use smartphones led to produce many challenges for the users; most of these challenges relate to information security. The biggest issues for the users is the loss of personal information due to the lack of users' awareness about security threats and risks. In order to mitigate those issues, modern smartphone has security features integrated. There is a need to assess user awareness level in smartphone security features. Then the factors that contribute to user awareness level should be identified. Also, the relationship between identified factors and the level of user awareness. This research studies on user awareness toward these smartphone's information security threats and features. This thesis focus to explore the factors that affect user awareness level and to measure the relationship between awareness level and the factors. Respondents for this study were 300 students from Zawia university aged between 18 to 33 years old, because these ages are the largest age group using smartphones. In addition, they are exposed to variation of application of Internet usage and more vulnerable to security risks and threats. This study used the quantitative method. Based on the results, it is found that the users' awareness level of smartphone security features is at a moderate level. Also, their awareness of smartphone security threats was queried; it is at a moderate level of security awareness. Determining how other factors such as gender, age, educational level, academic specialization and smartphone experience influenced security awareness, these factors do not influence the security awareness. While the smartphone experience factor showed a moderate correlation and substantial relationship on the users' awareness level.

## ABSTRAK

Penyebaran telefon pintar membawa kepada menghasilkan pelbagai cabaran untuk pengguna; sebahagian besar daripada cabaran-cabaran berkaitan dengan keselamatan maklumat. Isu-isu yang terbesar bagi pengguna adalah kehilangan maklumat peribadi disebabkan oleh kurangnya kesedaran pengguna mengenai ancaman keselamatan dan risiko. Bagi menangani isu-isu tersebut, telefon pintar moden telah ciri-ciri keselamatan bersepadu. Ada perlu menilai tahap kesedaran pengguna dalam keselamatan telefon pintar. Kemudian faktor-faktor yang menyumbang kepada tahap kesedaran pengguna perlu dikenalpasti. Juga, hubungan antara faktor-faktor yang dikenal pasti. Kajian ini mengkaji mengenai kesedaran pengguna terhadap ancaman keselamatan maklumat ini telefon pintar dan ciri-ciri. Juga, karya ini memberi tumpuan untuk meneroka faktor yang mempengaruhi tahap kesedaran pengguna. Juga untuk mengukur hubungan antara faktor. Responden kajian ini ialah 300 orang pelajar dari universiti Zawia yang berusia antara 18-33 tahun, kerana peringkat umur ini adalah kumpulan umur yang terbesar menggunakan telefon pintar. Di samping itu, mereka terdedah kepada perubahan permohonan dalam penggunaan Internet dan lebih terdedah kepada risiko keselamatan dan ancaman. Kajian ini menggunakan kaedah kuantitatif. Berdasarkan keputusan, kami mendapati bahawa tahap kesedaran pengguna mengenai ciri-ciri keselamatan telefon pintar adalah pada tahap yang sederhana. Juga, kesedaran mereka terhadap ancaman keselamatan telefon pintar telah disoal; ia adalah pada tahap sederhana kesedaran keselamatan. Menentukan bagaimana faktor-faktor lain seperti jantina, umur, tahap pendidikan, pengkhususan akademik dan pengalaman telefon pintar dipengaruhi kesedaran keselamatan, Faktor-faktor ini tidak mempengaruhi kesedaran keselamatan. Manakala faktor pengalaman telefon pintar menunjukkan korelasi yang sederhana dan hubungan yang besar kepada tahap kesedaran pengguna. Akhir sekali, mengukur hubungan antara tahap kesedaran mengenai ancaman telefon pintar dan tahap kesedaran kepada ciri-ciri telefon pintar, yang menunjukkan hubungan yang sederhana dan hubungan yang besar.

## ملخص البحث

انتشار الهواتف الذكية أدى إلى إنتاج العديد من التحديات التي تواجه المستخدمين. معظم هذه التحديات المتعلقة بأمن المعلومات. أكبر القضايا للمستخدمين هو فقدان المعلومات الشخصية نظرا لعدم وجود وعي المستخدمين حول التهديدات الأمنية والمخاطر. من أجل التخفيف من تلك القضايا، الهاتف الذكي الحديث يمتلك ميزات الأمان المتكاملة. هناك حاجة الي تقييم وعي المستخدمين في امن الهواتف الذكية. ايضا لتحديد العوامل التي تؤثر في مستوى وعي المستخدمين. ثم لمعرفة العلاقة بين العوامل المحددة. هذه الدراسة البحثية تنطوي على وعي المستخدمين نحو ميزات الامان في الهاتف الذكي. أيضا، هذه الأطروحة تركز على توعية المستخدم على التهديدات الأمنية في الهواتف الذكية. بالإضافة إلى ذلك، يجري أيضا دراسة عن وعي المستخدمين نحو التهديدات الأمنية على منصات الهاتف الذكي. وكان المشاركون في هذه الدراسة 300 طالب وطالبة من جامعة الزاوية والذين تتراوح أعمارهم بين 18-33 عاما، وذلك لأن هذه الأعمار هي أكبر فئة عمرية تستخدم الهواتف الذكية. بالإضافة إلى ذلك، يتعرضون لمختلف التهديدات من استخدام الإنترنت وهم أكثر عرضة للمخاطر والتهديدات الأمنية. استخدمت هذه الدراسة المنهج الكمي. استنادا إلى نتائج، وجدنا أن مستوى وعي المستخدمين من ميزات الأمان في الهاتف الذكي هو بمستوى معتدل. أيضا، كان هناك تساؤل عن وعيهم من التهديدات الأمنية في الهاتف الذكي. وكان مستوى معتدل من الوعي الأمني. أيضا تم تحديد كيفية العوامل الأخرى مثل نوع الجنس، العمر، المستوى التعليمي، التخصص الأكاديمي و الخبرة في الهاتف الذكي تؤثر على الوعي الأمني، وهذه العوامل لا تؤثر على الوعي الأمني. في حين أظهر عامل الخبرة في الهواتف الذكية ارتباط معتدل وعلاقة كبيرة مع مستوى وعي المستخدمين. وأخيرا، قياس العلاقة بين مستوى الوعي الامني حول تهديدات الهواتف الذكية ومستوى الوعي حول مزايا الهواتف الذكية، والتي أظهرت وجود ارتباط المعتدل وعلاقة كبيرة.

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