Yasamin Hamza Alagrash, Ph.D.
Computer Science & informatics
Senior lecturer, computer science, college of science, computer science department, Mustansiriyiah university, IQ
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EDUCATION

Ph.D. Computer Science and Informatics" December2020 2016-2020
Oakland University, Michigan, United States
Dissertation: MACHINE LEARNING BASED ON USER BEHAVIOR AS A RESOURCE UTILIZATION TO DETECT MALWARE
Master of Computer Science and Information System, Data Security, University of Technology-IQ
Thesis "Design and implementation an Expert system to detect unknown viruses under Local Area Network"
Bachelor of Computer Science and Statistics
Al-Rafeden University College

MAJOR RESEARCH EXPERIENCE

Research Assistant, Oakland University, U.S (PI: Julian Rushi, Ph.D) 2018-2020

- Detect compromised user accounts based on the user behavior analysis project.
- Analyze user behavior to design solutions for those behaviors and develop specifications.
- Capture user data from low-level data via PowerShell script to create new and original datasets.
- Implement machine learning Python code to analyze user data. Recognize malware codes based on user behaviors.

Blockchain Project:-

- Utilized blockchain technology to add trust solutions to the webcam; controlled the web session via WDK.
- Applying blockchain concept, smart contract and improve performance. Cryptocurrency and key management.

Ph.D. Student, Oakland University 2016-2017

Malware detection based on static and dynamic analysis project

Ph.D. Student, Florida Institute of Technology 2014-2015
Completed multiple projects including:

- Android-based Secure Banking Gateway Exploited e-Business Transactions Course Project: Designed and implemented a secure banking gateway based on exchanging encrypted SMS messages.

- User Impressions of Choose Your Own Authentication Course Project: Developed a questionnaire, analyzed data, and concluded the results. Applied statistical analyzing tools to concede the results.

- Automatic Speech Recognition Over the Web: Performed a comprehensive project regarding a speech recognition web kit. Utilized a simple human computer interaction approach to design an automatic speech recognition approach over the web. Analyzed and gained an understanding of user requirements, designed solutions for the requirements, and wrote specification.

Lecturer, Department of College of Science- department of Computer Science Al-Mustansiriyah University -IQ, 2010-2013

- Developed feed-forward neural networks (FFN) training using particle swarm optimization (PSO)
- Design fuzzy logic method for malware detection.

PUBLICATIONS

Al.Almtrf, **Y. Alagrash** , M. Zohdy, "Framework Modeling for User Privacy in Cloud Computing." 2019 IEEE 9th Annual Computing and Communication Workshop and Conference (CCWC). IEEE, 2019

Y.Alagrash , F.Alghayadh, A.Alshammari, D.Debnath,"Cloud Computing: A Framework for Balancing Accountability and Privacy Based on a Multi-Agent System." 2019 Cybersecurity and Cyberforensics Conference (CCC), p. 6-12, 2019

Y. Alagrash , A. Drebee,N. Zirjawi,"Comparing the Area of Data Mining Algorithms in Network Intrusion Detection." Journal of Information Security, 11.01, 2019

Y. Alagrash , N. Mohan, S.Rani Gollapalli, J.Rrushi, "Machine Learning and Recognition of User Tasks for Malware Detection." In Proceedings of the IEEE International Conference on Trust, Privacy, and Security in Intelligent Systems and Applications, Los Angeles, CA, 2019

F. Alghayadh, **Y. Alagrash**,Debnath, Debatosh. "Privacy and Trust in Cloud Computing." International Journal of Advance Research, Ideas and Innovations in Technology, 4.4, 2018

Y. Abdulamir,N. Ahmed, "Ethical Hacking: Kaspersky Virtual Keyboard Vulnerability to Kernel and User Level Kellogg." Iraqi Information, Technology Journal, 2011

Y. Abdulamir, "A Trust System Based on Multi-Level Virus Detection." Journal of Computer Science, 6.4, p.457-460, 2010

Y. Abdulamir, "Design and Implementation of Virus Detection Protection Systems Under Open Environments." Proceeding of the 4 th international multi-conference on computer science and information technologies. Applied science private university, Jordan, 2008.
Y. Alagrash, H.Badih, and J. Rrushi, " Malware Detection via Machine Learning and Recognition of Non-Stationary Tasks", The

18th IEEE Int'l Conference on Dependable, Autonomic and Secure Computing Agust17-21 2020, Calgary, Canada. Accepted.

H.Badih, **Y.Alagrash** and J. Rrushi, "'A Blockchain and Defensive Deception Co-design for Webcam Spyware Detection", "The 18th IEEE Int'l Conference on Dependable, Autonomic and Secure Computing Agust17-21 2020, Calgary, Canada. Accepted.

H.Badih, **Y.Alagrash,"** Static Analysis Framework Based on Multi - Agent System"**,** 2020 IEEE International IOT, Electronics and Mechatronics Conference (IEMTRONICS),Accepted

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HONORS AND AWARD

- Honoring sliver shell from Ministry of Higher Education and Scientific Research, Baghdad, Iraq 2010.

- Award Travel Grand to attend $1000 IEEE International Conference on Trust, Privacy and Security in Intelligent Systems and Applications, Los Angeles, California, USA, December 2019.

TEACHING

College of Computer Science of Engineering, department of Computer Science and informatic , Oakland university

Sep.2020
Course: CSI 2350 Prog/in Vis C# for NET Tech.

Lecturer, College of Science- department of Computer Science ,Al-Mustansiriyah University -IQ, 2010-2013
Courses: Computer network and communication system , data security, Distributed data base
Responsibilities: Developed the contents of the courses, Prepared and taught weekly 2-hour lectures for sections of 40 senior and junior-level undergraduates. Held weekly office hours. Graded quizzes, assignments, and course exams.

Graduate Teaching Assistant, Department of College of Science- department of Computer Science Al-Mustansiriyah University -IQ, 2003-2010
Courses: operating system concept, and Network Security lab, system analysis, distributed system

TECHNICAL &PROFESSIONAL EXPERIENCE:

Cyber security Engineering, Art computer system and technology company, Baghdad, Iraq 2005 – 2012.

Data Analyst -Al-Hayat Online Market – Baghdad- Iraq 2007-2009

Security Consultant | Ministry of Justice – Baghdad - Iraq 2004-2006

Database Administrator | United Nations UNICEF – Baghdad Office 1998-2000

LEADERSHIP EXPERIENCE

Graduate Research Assistant, Department of College of Science- department of Computer Science Al-Mustansiriyah University -IQ 2003-2009

Responsibilities: Mentored two graduate students during their thesis work. Held weekly meetings to discuss research progress. Edited abstracts, posters, and presentations.

Multiple Roles, Department of College of Science- department of Computer Science Al-Mustansiriyah University -IQ 2003-2013

Graduate Students Examining Committee Member, Head of the Scientific Affairs Unit, and Admissions Committee: Reviewed PhD student applications and participated in selection meeting.

PROFESSIONAL ASSOCIATIONS

IEEE Computer Society Member

IEEE Women in Engineering

Skills:

- Extensive experiences in security and malware detection , ethical hacking and expose vulnerability, NIDS based on anomaly and misuse, dynamic and static analysis for malware detection, Cryptocurrency and key management.

A strong understanding of the Privacy (user, data, environment)

- Willingness to develop and become a subject matter expert in data privacy
- Ability to process, progress and complete matters independently in a high paced environment seeking guidance when needed, along with a flexible and collaborative style with an ability to adapt to changing priorities
- Excellent interpersonal, influencing skills as well as exemplary and unquestionable personal integrity and moral compass

Extensive Experience in machine learning: ability to create large , complex data sets from disparate sources while managing data quality both for statistical analysis and data management.

- Expertise implementing a variety of machine learning technique

- scripting languages, Python , R, PowerShell script
- Experience with traditional machine learning packages,
- Good command of SQL
- Accomplished technical professional who excels at researching, designing, and developing security tools. Skilled at solving problems in data security using a machine learning methodology. building mathematical models for complex real-world problems. Experienced at developing and architecting different environments