

# Curriculum Vitae

Hussein Alsheakh, PhD



*Mustansiriyah University – College of Pharmacy*  
**Mobile:** +964(751) 395-8849; WhatsApp+1(269) 447-1249  
**Email:** [hussein.alsheakh@uomustansiriyah.edu.iq](mailto:hussein.alsheakh@uomustansiriyah.edu.iq)  
<https://uomustansiriyah.edu.iq/e-learn/profile.php?id=3966>



## PERSONAL SUMMARY:

Dr. Hussein Alsheakh is a lecturer in the Department of Clinical Laboratory Sciences - College of Pharmacy at Mustansiriyah University. Hussein's received his PhD from the Department of Computer Science at Western Michigan University, Kalamazoo, Michigan, USA, June 2020; and MSc. degree in Information Technology from University Utara Malaysia, Kedah, Malaysia March 2009. Hussein's research interests span across broad areas of **Cybersecurity**, Internet of Things (IoT), **Network Security**, **Trust**, **AI** inspires security, Machine Learning (ML), Deep Learning (DL), information security, with a particular focus on cyber-physical systems, intelligent connected communities, **Smart Home**, Smart City, Cloud, and Fog Security, next-generation wireless networks, and data-driven security analytics. Hussein's have Academic and industry experience as a researcher, instructor, and system administrator & programmer. Dr. Hussein's is a reliable, independent team worker. He has a leadership experience, solid organizational skills, and innovative thinking to advance the development of current and future products, systematic problem-solving skills, integrity, good communication and interpersonal skills, high teamwork spirit, and ability to work under stress.

- Ph.D. in Computer Sciences (Dissertation title: A Unified Decentralized Trust Framework for Detection of IoT Device Attacks in Smart Homes). My dissertation is on developing a framework in the cloud, fog, and edge middleware to calculating trust value for Internet of Things (IoT) devices based on device behavior using Artificial Intelligence (AI) Inspire Security, Neural network, and Machine Learning (ML).
- Researcher on parallel computing Isoefficiency for measuring scalable load balancing, and Big Data.
- Ability to published scientific papers in Computer Science and related area.
- Master's degree in Information Technology (M.Sc. IT), and a Bachelor's degree in Computer Science (B.Sc. CS)
- 18-years' experience in education and industry such as networking, system administrator, hardware/software, IT support, and programming using C++, Java, Visual Basic, MATLAB, and image processing.
- Experienced in MATLAB and SIMULINK.
- Experienced in embedded technology, software development, Hardware/Software co-design, testing, and data acquisition, software integration, and debugging, machine learning, AI, and neural network.
- Experienced in VMware, SDN, data science and Big Data analysis, machine learning, AI, neural network, database management, and administration, Oracle, MySQL, PLSQL, NoSQL, data-driven systems analysis, simulation, and software opensource development, Python, R, PHP, and .NET.
- Team worker.

## EDUCATION:

- Western Michigan University, Kalamazoo, MI, USA  
**Ph.D. in Computer Science – Information Technology**                      **June 2020**  
  
**Dissertation:** A Unified Decentralized Trust Framework for Detection of IoT Device Attacks in Smart Homes
- University Utara Malaysia, Sintok, Kedah, Malaysia  
**M.Sc. in Information Technology**    **March 2009**  
  
**Thesis:** Web-Based Intellectual Property (IP) Management Application for Postgraduate Student Project
- Al-Mamon University College, Baghdad, Iraq  
**B.Sc. in Computer Science**    **June 2004**  
  
**Project:** Enhance Image Quality Using Neural Network.

## ACADEMIC HONORS AND AWARDS:

- Certificate of Appreciation from Minister of Higher Education and Scientific Research in Iraq, 2021, 2022, 2023.
- Award **NSF grants** SATC2030611 and OAC-2017289, USA.
- **Graduate Student Teaching Intensive (GSTI 2019)** – Faculty Development Western Michigan University, Kalamazoo, MI.
- **Responsible Conduct of Research (RCR 2016)** – **80<sup>th</sup> % or higher**. Graduate College at Western Michigan University, Kalamazoo, MI 49008.
- Certificate of Appreciation the **paper reviewer** for Information Science + IT Education Conference, Oct. 2010.

## ACADEMIC / TEACHING EXPERIENCE:

**Part-Time (20h) Research Associate, Department of Computer Science - Western Michigan University,**

**Sep. 2020-Dec. 2020**

- Research Associate, responsible for building a Smart Home Internet of Things (IoT) Testbed to analyze devices' behavior.
- The lab involves both graduate and undergraduate students in IoT security research focusing on Artificial Intelligent (AI) that inspires security, data science, and machine learning.
- The lab aims to integrate core literacy and advanced skills at the intersection of crowdsensing, IoT security, and AI into the nation's educational curriculum and training materials for faculty, undergraduate, and graduate students at education institutions.

**Part-Time Instructor, Dep. of Computer Science Western Michigan University, Kalamazoo, MI**

**Sep. 2019- June 2020**

- Part-Time Instructor in the Department of Computer Science – teaching lab for **CS 6350 - Science of Cybersecurity, Spring 2020.**
  - Detection network attack, network monitoring, and design a secure network. Using Wireshark, Cisco Joy, Python, course grader, and prepare lab manual.
- Part-Time Instructor in the Department of Computer Science – teaching lab for **CS 5550 - Computer Networks and Distributed Systems, Fall 2019.**

- The design and evaluation of computer networks performance. Using Wireshark, VMware, SDN, socket programming using C++, course grader, and prepare lab manual.

**A faculty member at College of Pharmacy, Mustansiriyah University, Baghdad- Iraq**

**Sept. 2009- present**

- **Teaching Medical Biostatistics for postgraduate students (MSc level)**
- **Teaching Seminar class for postgraduate students (PhD, and MSc).**
- **Teaching Computer Science** subject (class and lab) for first and second stage students.
- **Teaching English class for 1<sup>st</sup> and 3<sup>rd</sup> stage students.**
- Grading assignments, projects, and tests.
- Creating solutions manual for the given assignments and projects.
- Planning and delivering Tutorials for students.
- **Member on many MHESR level committees** such as: Establishing Industry advisory board with IREX, Higher Education EXPO with AUIB, Devolve scholarship program in Iraq committee with HCED , Evaluate Iraqi Cultural attached websites committee, and Study Malaysia program to devolve higher education committee.
- **Member of many Mustansiriyah University level committees** such as: Exam Committee, Plagiarism Committee, International Conference with AUIB scientific committee, partnership with private colleges committee, and Pharmacy credential from ACPE committee, students academic guidance committee, and college strategic plan committee.
- Working as a director for the online test station for the license of Internet Computer Core Certified (IC3) Certificate (By Certiport) at the Mustansiriyah University at the College of Pharmacy, Baghdad, Iraq, 2010-2013.

**Adjunct Faculty at the Technical Computer Engineering Department, Dijlah University, Baghdad- Iraq**

**Sep. 2011-June 2013**

- Taught classes on Distributed System, System Software and Computer Architecture and Design, teaching class and lab, grading assignments, projects, and tests. Create solutions for the given assignments and Projects. Planning and delivering Tutorials for students.

**Adjunct Faculty at the Technical Computer Engineering Department, Al-Salam University College, Baghdad- Iraq**

**Sep. 2011-June 2013**

- Taught a class on Distributed System, teaching class and lab, grading assignments, projects, and tests. Creating solutions for the given assignments and Projects. Planning and delivering Tutorials for students.

**Research Assistant (RA), University Utara Malaysia, Kedah Malaysia**

**Jan. 2008-March 2009**

- Worked on a project of development Information Communication Technology services for the ruler area.

## COURSES TAUGHT:

Undergraduate	Postgraduate
1. Computer Science and English class 1st stage - Mustansiriyah University	1-CS 6350 - Science of Cybersecurity- Western Michigan University
2. Computer Science 2nd stage - Mustansiriyah University	2- CS 5550 - Computer Networks and Distributed Systems-- Western Michigan University
3. Distributed System -4th stage - Computer Engineering Department, Dijlah University	3- Medical Biostatistics -Mustansiriyah University
4. System Software-2nd stage -Computer Engineering Department, Dijlah University	4- Seminar class - Mustansiriyah University
5. Computer Architecture and Design- 2nd stage - Computer Engineering Department, Dijlah University	
6. Distributed System – 2nd stage Technical Computer Engineering Department, Al-Salam University College	
7. English 3rd stage - Mustansiriyah University	

## PROFESSIONAL AFFILIATIONS:

**Part-Time (20h) System Admin and Programmer Computer Aided Engineering center (CAE) Western Michigan University** <https://wmich.edu/engineer/technology>

**Jan 2016-Dec 2020**

- Responsible for network safety and efficiency.
- Linux and Windows Server installation, upgrades, maintenance, server's data backup, and recovery.
- Created and managed VMware servers' images.
- Monitored lab software and hardware troubleshooting and fixing machines Installations, PCs, Printers, Plotters, and Scanners as well as medium-sized networks.
- Managed user accounts on the active directory.
- Managed and configured active directory and group policy.
- Networking installation and design, cabling, network devices configuration.
- Following and resolving users' tickets.
- Audio and Video devices configuration in the meeting rooms.
- Maintained the daily performance of computer systems.
- Responded to email messages for customers seeking help.
- Provided helpdesk support and resolve problems to the end user's satisfaction.
- Run reports determining malfunctions that continue to occur.

**Database Developer and Designer, Board of Supreme Audit, Baghdad- Iraq**

**March 2009-Sep. 2009**

- Worked in the project of a data analyst for Big Data using Oracle (installation, design, reporting, and inquiry).
- Submit the weekly reports for network performance.

## **Data analysis and Programmer, Iraq Community on Public Integrity, Baghdad- Iraq**

**Nov. 2005-March 2007**

- Worked as a system analyzer and DBMS, SQL, Datawarehouse, developing web-based mobile applications using HTML /WML /WMLS /JavaScript /PHP/ASP.NET/ JSP and Java applications, and IT support and diagnosis.
- Managed a team that responds to and provides innovative solutions to customers' inquiries in software and networking fields.

## **System Administrator and IT, Ministry of Justice, Baghdad- Iraq**

**Jan. 2005-Nov. 2005**

- Designed and maintained computer network, web design, Java and C++ programmer, computer maintenance and troubleshooting diagnosis.
- Installed internet systems via satellite: HUGHES, Nera Linkstar, and IDirect.
- Installed and maintaining the wired and wireless network for the ministry of Justice in Iraq.

## **Attended Conferences and Workshops**

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- 2021 IEEE 22nd International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM).
- IEEE MASS 2020: 17th International Conference on Mobile Ad-hoc and Smart Systems, 2020, New Delhi, India. (funded by National Science Foundation NSF)
- IOP Conference Series: Materials Science and Engineering, Volume 1094, 1st International Conference on Sustainable Engineering and Technology (INTCSET 2020) 15th-16th December 2020, Baghdad, Iraq.
- The 2nd Postgraduate Conference: Advances in Pharmaceutical Sciences with AUIB, 2022
- Big Data Ignite Workshop, Sep. 29-30, 2016 Grand Rapids, MI 49503, USA.
- 12th Western Michigan University IT Forum in Big Data and the Internet of Things (IoT), WMU, Kalamazoo, MI 49008, USA, Nov. 10-11, 2016.
- ICHITA-IT Forum Joint Conference: Exploring Health IT Innovation and Cybersecurity in the Digital Era, WMU, Kalamazoo, MI 49008, USA, Nov. 2-3, 2017.
- Simulink MATLAB workshop, WMU, Kalamazoo, MI 49009. USA, Fall 2016.
- Research and travel grant preparation workshop, WMU, Kalamazoo, MI 49009, USA, Fall 2014.
- Workshop on model-based problem solvers - theory and application 2008, University Utara Malaysia (UUM), Sintok, Kedah, Malaysia.
- Workshop on using open source for building a website with contact management system (CMS) JOOMLA, University Utara Malaysia (UUM), Kedah, Malaysia, April 2008.
- Workshop on Model-base systems for industrial applications, University Utara Malaysia (UUM), Sintok, Kedah, Malaysia, Feb. 2008.

## PUBLICATIONS:

- Waleed Algriree, H. alsheakh, Nasri Sulaiman, Maryam Isa, Ratna K. Z. Sahbudin, Siti L. M. Hassan, Emad Hmood Salman, "Validation hybrid filter detection for Multi-User multiple input multiple output F-OFDM by Universal software radio Peripheral", **Alexandria Engineering Journal**, Volume 74, 2023, Pages 241-268, ISSN 1110-0168, <https://doi.org/10.1016/j.aej.2023.04.033>. (**SCOPUS Q1, IF 6.626, Cite Score 8.3**) (<https://www.sciencedirect.com/science/article/pii/S1110016823003071>)
- Waleed Algriree, H. alsheakh, Hazeem T Baqer, Nasri Sulaiman, Maryam Isa, Ratna K. Z. Sahbudin, Siti L. M. Hassan, Emad Hmood Salman, "End to End UFMC Detection Channel Model in CSAT and Non-Terrestrial Networks to Service 5G/ 6G". Submitted to **Heliyon JOURNAL (Scopus Q2)** 1<sup>st</sup> revise April 2023.
- Ehsan sabbar, Hazim A. Al-Zubaidi; Amer K. Aljumaili; Mustafa H. Al-Jumaili; Ahmed I Al-Jumaili; Hussein Alsheakh, "Effects of Ag Content on Microstructure Evolution, Intermetallic Compound (IMC) and Mechanical Behavior of SAC Solder Joints," submitted to **Microelectronics Reliability (Scopus Q3)**, 1<sup>st</sup> revise received March, 2023.
- Tariq M Salih, H. Alsheakh, Mustafa Abdulsalam, "Secure and Trustworthy Smart Water Metering System Based on Blockchain Technology" (under process project) 2023
- A Survey on Secure IOT Middleware (under process project) 2023
- A comparison study of using Fast Fourier Transform Using OpenMP and odd even transposition sort algorithm Using MPI in parallel processing (under process project) 2023
- A review of load balancing techniques utilization in cloud computing environments (under process project) 2023
- P. Roy, S. Bhattacharjee, **H. Alsheakh**, and S. Das, "Resilience Against Bad Mouting Attacks in Mobile Crowdsensing Systems via Cyber Deception", 2021 IEEE 22nd International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM). **Scopus**
- **H. Alsheakh**, and S. Bhattacharjee, "Towards a Unified Trust Model for Detecting IoT Device Attacks in Smart Homes", IEEE MASS 2020: 17th International Conference on Mobile Ad-hoc and Smart Systems, 2020, New Delhi, India. (funded by National Science Foundation NSF) DOI: 10.1109/MASS50613.2020.00080- **Scopus**
- R. Almamlook, W. Al-Mawee, A. Alden, **H. Alsheakh**, and H. Bzizi, "Evaluation of Machine Learning Models to Forecast COVID-19 relying on Laboratory Outcomes Characteristics in Children," IOP Conference Series: Materials Science and Engineering, Volume 1094, 1st International Conference on Sustainable Engineering and Technology (INTCSET 2020) 15th-16th December 2020, Baghdad, Iraq.
- **H. Qasim**, "Letter Recognition Data Using Neural Network," IJSER, Vol. 7(5), May 2013, pp. 737-742.
- **H. Qasim**, T. Jameel "E-Government Application for Retrieving Queries Based on Agent Systems in The Iraq Rural Communities Area," Al-Yarmuke University College Conference, Baghdad, Iraq, Vol. 2(1), April 2012, pp. 112-121.
- **H. Qasim**, A. Al-Sady, "Developing (EPN) Model for College of Pharmacy Mustansiriya University," Almustansiriya Journal of Pharmaceutical Science (AJPS), First Scientific Conference of College of Pharmacy, Almustansiriya University, Baghdad, Iraq Issn 1815-0993, Vol. 9 (1), Feb. 2011, pp. 212.
- H. Al-samarraie, T. Jameel, **H. Qasim**, M. Abbas, "Comparative Study of Media Streaming Protocols over Wireless IP Network," International Journal of Computer Science and Network Security (IJCSNS), Soongsil University Seoul, Korea Vol. 10(7), PP.32-42, July 2010. **Scopus**
- End to End UFMC Detection Channel Model in CSAT and Non-Terrestrial Networks to Service 5G/ 6G (under process project)

معلومات شخصية :

الاسم : حسين سالم قاسم الشيخ.

اللقب العلمي: مدرس دكتور.

الاهتمامات البحثية:

اهتم بالعمل في مجال امنية الشبكات والسيرفرات وانترنت الاشياء والمنازل الذكية باستخدام تعليم الاله والذكاء الاصطناعي و علم البيانات، امنية الحوسبه السحابية والضبابية وحوسبه الحافة.

### الشهادات الاكاديمية و الدورات:

- دكتوراه في علوم الحاسبات – امنية شبكات من جامعة مشكان الغربية 2020.
- ماجستير في تكنولوجيا المعلومات ( IT ) من جامعة اوتارا الماليزيه 2008.
- بكالوريوس علوم حاسبات – كلية المأمون الجامعه 2004.
- لجنه وزاريه مع منظمه IRX الامريكية بخصوص تطوير المناهج بما يتلائم سوق العمل المحليه لتكوين نواه لـ Iraqi Industrial Board.
- دوره طرائق التدريس في جامعه مشكان الغربيه 2018.
- دوره في اخلاقيات البحث والعلمي في جامعه مشكان الغربيه 2016.
- بكالوريوس في علوم الحاسبات من كلية المأمون الجامعة 2003-2004.
- دورة طرائق التدريس في الجامعة المستنصرية 2009.
- شهاده ال IC3.

### اللجان :

- العديد من اللجان الوزاريه.
- العديد من اللجان الجامعية.
- العديد من لجان الكلية

### العمل :

- استحدثت مختبر امنية المنازل الذكية وانترنت الاشياء في قسم علوم الحاسبات - جامعة مشكان الغربية والذي يخدم طلبه الدراسات العليا بالابحاث والدراسات الاولى سنة 2020 .
- محاضر في جامعه مشكان الغربيه 2018-2020.
- مبرمج اقدم ومختص امنية الشبكات في مركز الحاسبه - جامعه مشكان الغربيه 2016-2020.

- معاون مبرمج في وزارة العدل \دائرة المفتش العام 2005\2006.
- مبرمج في هيئه النزاهة العامه \دائرة التحقيقات العامة 2006\2007.
- مساعد باحث ومسؤول مختبر قواعد البيانات في جامعة الشمال الماليزية 2008 UUM.
- مبرمج قاعدة البيانات باستخدام اوراكل في ديوان الرقابة المالية عام 2009.
- من 2009 الى الان اعمل تدريسي في كلية الصيدلة / الجامعة المستنصرية.

### الخبرات في الحاسوب:

- امنيته شبكات والسيرفرات.
- الحوسبه السحابيه.
- امنيته انترنت الاشياء.
- لغات البرمجه (بايثون, R, جافا, سي++, الفجول بيسك, SQL).
- تصميم مواقع الانترنت .
- تصميم قواعد البيانات باستخدام اوراكل .
- تحليل وتصميم الانظمة .