Curriculum Vitae

Contact information

Name : Ali Hussein Ahmed Bekhit
Date of Birth : 29/8/1987
Place of Birth : Egypt – Assiut – Al Ghanaium
Nationality : Egyptian
Military Status : Exempted
Emails: ali.hussein@aun.edu.eg , alihussin.it@gmail.com
Telephones: **Mobile:** +201280324830 , +201026697937
Graduation Degree: Excellent (hons)
Graduation Project Degree: Excellent
Current Professions:

- Lecturer in Faculty of computers and information–Information Technology Department Assiut University since 5-12-2021.
- Manager of Online Learning Sector & IT in ITTU since 1-11-2021
- Executive Head of Computer Consulting Center – Assiut University from Feb\2020 - Feb\2022
- General Supervisor of Assiut University Hospitals IT Unit since Jun 2017
- Supervisor of the Statistical Analysis Unit at the Scientific Theses and Research Service Center – Assiut University since Jan 2022

International Toefl-iBT Score: 78

Research Gate:
<https://www.researchgate.net/profile/Ali_Ahmed38>
Google Scholar:
<https://scholar.google.com.eg/citations?user=jSLl6GkAAAAJ&hl=ar>
AUN Profile:
<http://www.aun.edu.eg/arabic/membercv.php?M_ID=4260>

Education

Year of Completion	Educational Institute and Country	Degree
2008	Faculty of Computers & Information- Egypt – Assuit University	B.Sc. Information Technology with honors rank
2010	Faculty of Computers & Information- Egypt – Assuit University	Finished pre-master Study Grade: 88.2%
2013	Faculty of Computers & Information- Egypt – Assuit University	M.Sc. Information Technology
2016	Faculty of Computers & Information- Egypt – Assuit University	Finished pre-PhD Study Grade: 82%
2021	Faculty of Computers & Information- Egypt – Assuit University	Ph.D. Information Technology

Research Interests

- Wireless Sensor Networks.
- IoT, SDN, SDR
- Networks
- Cognitive Radio/Next Generation Networks
- Steganography & Cryptography
- Video analysis
- Computer Vision
- Multimedia

- Image processing & analysis
- Face Recognition

Technical Skills

Programming Languages

- C#.Net
- C++ & MFC.
- Java .
- Python 2, 3
- Fair Knowledge Of OpenAL, OpenCV, OpenGL and DirectX.

Web Technologies :-

- ASP.Net, ADO.Net .
- JSP, Servlets and JDBC
- Django
- Web publishing
- HTML, XHTML.

Development Tools and Development Environments:-

- All Microsoft Visual Studio version (now vs 2022)
- NetBeans

Database Management Systems

- Microsoft Access.
- Microsoft SQL Server.
- MySQL

Case Tools

- IP Switch What's UP.
- Packet Tracer, Ethereal, WireShark.

Operating Systems

- Windows Platforms
- Linux Platforms (Debian, Ubuntu, RaspbianJessie)

Productivity Suites

- Microsoft Office

Soft Skills

- Ability to work in groups.
- Good Research Abilities.
- Planning and organization.
- Grading

Conceptual knowledge

- Object Oriented Concepts.
- Software Engineering Concepts .
- System Analysis and design Concepts.
- Database designing Concepts.
- Distributed Systems Concepts.
- Computer Security Concepts.

Courses I can Teach to students

- Programming Fundamentals
- IT Fundamentals

- O.O.P
- File Organization
- Data And Computer Communication
- Structured Programming
- Web Programming
- Network Programming
- Network Analysis And Design
- Network Management
- Multimedia Systems
- Data Compression
- Image Processing
- Operating Systems
- Security

Language Skills

Language	Excellent	Ability Very Good	Good	Fair
English		√		
Arabic	√			

Master Research

- Routing in wireless sensor networks using genetic algorithm

Current/PhD Research

- IoT Security

PROJECTS MEMBERSHIPS
2009-Current

Hardware and Software maintenance of the project entitled "Online Learning Utilizing Video Conferencing and HP mobile technology at the Faculty of Computers and Information-Assiut University (OLVCHP, FCI-AU) " Funded by HP.

Project Website: *http://www.aun.edu.eg/faculty_computer_information/hplab/team-members.html*

PARTICIPATION IN DEVELOPING COURSES/PROGRAMS/CURRICULUM/PLANS

2010-current

Member in the team that prepares and outlines the faculty of Computers and Information curriculum in credit hour

2010-current

Member in the team that modify the program and courses contents for the faculty of Computers and Information 2004 curriculum

Accomplishment

Graduation Project	
Title	**Client / Server Application – Smart Door Access System**
Description	System centralized on solving the problem of entrance control to faculties, banks or any other secure corporation. Such system manages Barcode readers, attached to each door, and opens the doors for registered users only. A server computer holds the lists of doors and users; it has a graphical interface that can be accessed by administrator. The system supports multiple doors, multiple users.

Other Projects						
Project Name	**Descritption**	**Tools Used**	**Yea r**	**Funded By**	**My Role**	**Project Participati on %**
Egypt Metro Control System	System based on using RFID technology for managing and controlling Egypt metro Embarking and disembarking of passengers. Such system divided into two main parts the first is Issuing and administration, the second is for monitoring each satiation (check tag expire date and subscription type, etc).	C#, Socket programmi ng	2008	هيئة ITIDA تنمية صناعة تكنولوجيا المعلومات	leader/Develp per	70%
Drawing tool	Implementation Of the Basic Computer Graphics Algorithms for drawing Objects as (Circles, rectangles, squares,…etc)	Version With C++ API ,Version With C#.Net, Version With JAVA	2007	مشروع طلابى غير ممول	leader/Develp per	100%
Computer Vision Tool (Simple OCR)	Program that takes binary image extract Contours and Recognize Digits written by hand or machine with success ratio of 86.6 %.	Version With C#	2012	مشروع طلابى غير ممول	leader/Develp per	100%

Image Processing Tool	Perform large number of Image Processing Techniques for image operations, Filtering, equalization, Edge detection, and other enhancement techniques. (Tiny Photoshop with advanced operations)	Version With C#	2008	مشروع طلابى غير ممول	leader/Develpper	100%
Chatting Program	Something like MSN Messenger, Which supports muli-client with text, audio and video chatting	Version With C# Sockets , Version With Java Sockets	2006	مشروع طلابى غير ممول	leader/Develpper	100%
Dormitory Automation system	Performs management of *Assiut* Dormitory.	C#.Net + Crystal Reports	2006	مشروع طلابى غير ممول	leader/Develpper	50%
Smart Screen Saver	An application that is based on the recognition of human face with error ratio of 40%.	OpenCV, C++, C#.Net	2008	مشروع طلابى غير ممول	leader/Develpper	50%
Morris Code Converter	Application that converts text to Morris code and vice versa.	C++ MFC	2005	مشروع طلابى غير ممول	leader/Develpper	100%
Voting System	Automated system for collecting surveys and visualization of student's opinions.	C#	2012	هيئة QASP دعم المشروعات الطلابية فى مجال جودة التعليم	leader/Develpper	50%
Dashboard for Assiut University Vice president for high studies	An asp.net based website that provides a set of statistics useful in high-level decision making.	C#.net , SQL server	2017	جامعة أسيوط	leader/Develpper	100%
برنامج ادارة شئون الطلاب والكنترول	A desktop based application for managing students grades in Assiut university. The system also keeps track of students' subjects' registrations and academic records.	C#.net, SQL server	2018 - 2022	حقوق ملكية فكرية محفوظة لى	leader/Develpper	100%

	البرنامج مفعل فى / الكليات الاتية حقوق/تربية/بيطرى/ر ياض الاطفال					
Manuscript management System	System to manage all aspects of manuscript submissions cycle (submission , reviewing , publishing)	Asp.net , sql server	2020	كلية الحقوق- جامعة أسيوط	leader/Develp per	30%
IoT Testbed	Design and implementation of an educational testbed for IoT nodes.	Django, Python 3, Rp	2020	المرفق القومى لتنظيم الاتصالات	Develpper	100%
برنامج لكشف الاقتباس بين ابحاث الطلاب	برنامج يهدف لمعرفة مدى التشابه بين ابحاث الطلاب بهدف مساعدة اعضاء هيئة التدريس فى تقييم ابحاث الطلاب	C#.net	2020	جامعة أسيوط	leader/Develp per	100%
برنامج ادارة الدراسات العليا	مفعل فى كلية التمريض ج اسيوط	Php, mySQL	2021	جامعة أسيوط	leader/Develp per	50%
موقع السكن بالليلة للمدينة الجامعية	مفعل بنظم المعلومات الادارية	C#.net, SQL server	2020	جامعة أسيوط	Develpper	100%
موقع الألتماسات للمدينة الجامعية	مفعل بنظم المعلومات الادارية	C#.net, SQL server	2019	جامعة أسيوط	Develpper	100%
موقع تنسيق رغبات الأطباء للوظائف الأكاديمية وطبيب مقيم	مفعل بمركز استشارات الحاسب	C#.net, SQL server	2022	كلية الطب- جامعة اسيوط	leader/Develp per	70%
IoT Based System to Check structural loading defects	تقنية للتنبوء بمشكلات المبانى الانشائية بعد الانتهاء منها والبدأ فى تسكينها - الموقع الاليكترونى مرفوع على الرابط http://195.246.49.67 /	Matlab, SQL, C#, C++, IoT sensors	2022	STDF Sience and Technology Developme nt Fund	Develpper	50%

My Publications:

1	A. H. Ahmed, N. M. Omar and H. M. Ibrahim,"Performance Evaluation of a secured IoT framework using Blockchain", Journal of Communications, vol. 17, no. 1, pp. 40-46, 2022.	2022	Q3 Journal
2	Mahmoud AbdelHafeez, Ali H. Ahmed and Mohamed AbdelRaheem , "Design and Operation of a Lightweight Educational Testbed for Internet of Things Applications", IEEE Internet of things Journal	2020	Q1 Jouranl
3	Ali H. Ahmed, Nagwa M. Omar, and Hosny M. Ibrahim, "Secured Service Discovery Technique in IoT," Journal of Communications, vol. 14, no. 1, pp. 40-46, 2018. Doi: 10.12720/jcm.14.1.40-46	2019	Q3 Journal
4	A. H. Ahmed, N. M. Omar and H. M. Ibrahim, "Secured Framework for IoT Using Blockchain," 2019 Ninth International Conference on Intelligent Computing and Information Systems (ICICIS), Cairo, Egypt, 2019, pp. 270-277, doi: 10.1109/ICICIS46948.2019.9014853.	2019	International Conference
5	Video Similarity Measurement and Search Ali H. Ahmed, Saddam Bekhet M. Hassaballah ,Amr Ahmed Recent Advances in Computer Vision, 85-112	2018	
6	Islam A. T. F. Taj-Eddin, Mahmoud Afifi, Mostafa Korashy, Ali H. Ahmed, Yoke Cheng Ng, Evelyng Hernandez, Salma M. Abdel-Latif, "Can we see photosynthesis? Magnifying the tiny color changes of plant green leaves using Eulerian video magnification," Journal of Electronic Imaging 26(6), 060501 (2 November 2017). https://doi.org/10.1117/1.JEI.26.6.060501 . Submission: Received: 23 June 2017; Accepted: 12 October 2017	2017	
7	Ali H.Ahmed, Nagwa M. Omar, Hosny M. Ibrahim,"Modern IoT Architectures Review: A Security Perspective",Conference: 8th Annual International Conference on ICT: Big Data, Cloud and Security (ICT-BDCS 2017),August 2017, DOI: 10.5176/2251-2136_ICT-BDCS17.30.	2017	International Conference
8	Ali H. Ahmed, Mahmoud Afifi , Mostafa Korashy, Ebram K. William, Mahmoud Abd El-sattar, Zenab Hafez, OCR System for Poor Quality Images Using Chain-Code Representation, Advances in Intelligent Systems and Computing , Springer, Vol 407 , 151-161, http://link.springer.com/chapter/10.1007/978-3-319-26690-9_14, 2015.	2016	
9	Mahmoud Afifi , Mostafa Korashy, Ali H. Ahmed, Zenab Hafez, Marwa Nasser, Telepresence Robot Using Microsoft Kinect Sensor and Video Glasses, Advances in Intelligent Systems and Computing , Springer, Vol 407, 91-101, NULL, November, 2015.	2016	
10	Mahmoud Afifi, Mostafa Korashy, Ebram K William, Ali H Ahmed, Khaled F Hussain, "Cut off Your Arm: A Medium-Cost System for Integrating a 3D Object with a Real Actor",International Journal of Image, Graphics and Signal Processing (IJIGSP),2014.	2014	

11	Ali H.Ahmed, Nagwa M. Omar, Hosny M. "IMPROVING WIRELESS SENSOR NETWORKS PERFORMANCE BY USING CLUSTERED VIRTUAL RINGS",International Journal of Ad hoc, Sensor & Ubiquitous Computing (IJASUC) Vol.3, No.3, June 2012	2012	
12	Ibrahim H.M., Omar N.M., Ahmed A.H. (2012) Utilizing Genetic Algorithm in a Sink Driven, Energy Aware Routing Protocol for Wireless Sensor Networks. In: Wyld D., Zizka J., Nagamalai D. (eds) Advances in Computer Science, Engineering & Applications. Advances in Intelligent Systems and Computing, vol 167. Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-642-30111-7_42	2012	

About my M.Sc

Title: A Robust Technique for Dynamic Routing in Wireless Sensor Networks based on Genetic Algorithm.

Abstract : Wireless sensor networks (WSNs) are considered the subject of the era due to its importance and wide applications. The last decade of research focused on how to improve its performance in terms of enlarging lifetime. Many WSN applications such as monitoring and reporting are time critical so, the performance of WSN can not only include lifetime, but also other performance measures such as delay must be taken into consideration as well.

The proposed work focuses on the WSN network layer which includes routing techniques as a main key in most WSN applications. A routing technique based on virtual rings and genetic algorithm is proposed to shorten the round delay time and maximizing the lifetime. This technique uses the virtual ring features in addition to clustering methods to divide the sensors in the network into groups containing nearby sensors. The main advantage of this proposed technique is that it maximizes the interval of the first node failure besides obtaining a reasonable delay in forwarding data to sink node through the usage of the virtual rings. The proposed technique enables sensor network to continue its operation during the continuous sensor failure without extra control packets by using alternate hops. The proposed technique operates on the base station only to save sensor's resources and indeed the power consumption.

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About my PhD:

Title: Secured IoT Framework

Abstract :

Internet of Things [IoT] enables a great number of heterogeneous internet-enabled devices to communicate through different protocols and network technologies. The last few years witnessed rapid improvements in IoT applications in different fields e.g. smart energy, public safety, smart farming and smart health. The recent research work focused on how to dynamically manage and secure IoT components across heterogeneous objects, transmission technologies, and networking architectures through proposing various IoT protocol stacks and security techniques. The need for standardized protocol stack increases interoperability and applications development. Many technologies such as software defined networks [SDN], Cloud, and Fog computing have integrated either to IoT applications or architectures to maintain or secure large scale and heterogeneous IoT networks.

The heterogeneous nature of IoT is a key challenge against developing secured standards which indeed limits the interoperability in maintaining and developing new solutions for IoT. Recently many frameworks is utilized to secure IoT such as PKI and Blockchain (BC) but the limited IoT devices' capabilities hinder the direct integration of these frameworks. PKI is utilized in various research work to secure the communications of IoT devices. The main issue that must be sustained during establishing secured frameworks is offloading IoT devices as much as could in addition to moving heavy computations away the devices. Ordinary and centeralized methods for keeping security such as rely on Certificate Authorities (CA) can help on offloading IoT devices but unfortunately does not scale. BC is a modern and distributed writeonly ledger that eliminates the need for third parity to secure and verify transactions between peers. Though BC is considered the most powerful technique for securing transactions between IoT devices.

This thesis presents fair review to the IoT standardization efforts in addition to the modern proposed secured IoT architectures and sheds the light on the converging technologies to IoT such as SDN, cloud and fog computing and their effect on IoT architectures. The thesis also introduces PKI based secure framework for securing the service discovery and enable secured service delivery. The framework presents a secured broker based, and trustworthy service discovery technique. This framework providers via implementing trust-management model, and securing further communications between service provider and consumer via generating and distributing session keys.

The thesis also proposes a secure BlockChain-based framework for monitoring applications. The main entities of the framework are a system administrator, user, and IoT devices. System administrator configures IoT devices and defines a set of access roles for the IoT device. After the setup phase, a smart contract is deployed into the BC via device gateways to define and manage user access for specific device. An initial set of commands (commonly associated with environmental and healthcare monitoring applications) are defined in the proposed framework. The commands are: 1) Start Logging, 2) Stop Logging, 3) Obtain timestamped value, 4) Set threshold for automatic actuating, and 5) Actuate. Transactions are considered as an execution of specific commands performed by users on IoT devices. In this work, gateways are treated as minors and can verify transactions in BC. While the BC is public and anyone can access the gateway, the gateway allows only authorized user to access the IoT device as enforced in the smart contract. BlockChain stores the transactions in blocks followed by closing it through a proof-of-work (PoW). The block finally is attached to the BlockChain. In order to test the proposed architecture, a private Ethereum testnet is used including system performance measurement. The proposed framework contributes and addresses the security, transparency, and lightweight by introducing secured IoT architecture with well defined and functional set of layers. The proposed framework architecture includes Blockchain layer. The main function of this layer is to manages all aspects of security among IoT nodes. Every group of IoT devices is assumed to have a gateway which acts as a BC node. Every transactions held in the network executes certain smart contract to ensure its Validity utilizes a broker software running on devices gateway to gain advantages of edge computing in offloading IoT devices from implementing heavyweight security algorithms. The main tasks of a broker are:network initialization, accurately matching users to providers.

Certificates:

Faculty of Computers and Information
Department Of Information Technology

Certificate

Name :**Ali Hussein Ahmed Bekhit**
Total Marks **3894 out of 4500 (86.53%)**

Graduation Date:: **June 200**
Grade Point Average: **Disti**

First Year 2004/2005		
Subject	**Date Of Exam**	**Grade**
Introduction To Computers	2005	V.Good
Electrical and Electronic Circuits	2005	Distinction
Mathematics (1)	2005	Distinction
Physics (1)	2005	Distinction
English Language	2005	V.Good
Organizational Behavior	2005	Distinction
Structured Programming	2005	Distinction
Digital Logic Design	2005	Distinction
Mathematics (2)	2005	V.Good
Physics (2)	2005	Distinction
Accounting	2005	V.Good
Business Administration	2005	Distinction
Total Marks & General Grade	870 / 1000 Distinction	

Second Year 2005/2006		
Subject	**Date Of Exam**	**Grade**
Object Oriented Programming	2006	Distinction
Data Structures	2006	V.Good
File Organization	2006	Distinction
Computer Organization	2006	Distinction
Mathematics (3)	2006	Distinction
Report Writing	2006	V.Good
Database Concepts	2006	V.Good
Data Communication	2006	Distinction
Microprocessors and Assembly Programming	2006	Distinction
Discrete Mathematics	2006	Distinction
Statistical Analysis and Applications	2006	V.Good
Professional Ethics and Legal Aspects	2006	Distinction
Total Marks & General Grade	955 / 1100 Distinction	

Third Year 2006/2007		
Subject	**Date Of Exam**	**Grade**
Visual Programming	2007	(Good)
Software Engineering	2007	Distinction
Analysis & Design of Algorithms	2007	Distinction
Formal Languages & Automata	2007	V.Good
Scientific Computations	2007	Distinction
Systems Analysis and Design	2007	Distinction
Operating Systems	2007	V.Good
Computer Graphics	2007	(Good)
Analysis of Programming Languages	2007	(Good)
Artificial Intelligence	2007	(Good)
Information Systems	2007	V.Good
Computer Networks	2007	Distinction
Total Marks & General Grade	980 / 1200 (V.Good)	

Fourth Year 2007/2008		
Subject	**Date Of Exam**	**Grade**
Network Management	2008	V.Good
Network Analysis and Design	2008	V.Good
E-commerce	2008	V.Good
Multimedia Systems	2008	Distinction
Elective Course I	2008	Distinction
Web Site Development	2008	Distinction
Network Security	2008	Distinction
Network Programming	2008	Distinction
Image Processing	2008	Distinction
Elective Course II	2008	Distinction
Project	2008	Distinction
Total Marks & General Grade	**1089 / 1200 Distinction**	

This certificate is issued upon his request

Director of Educational Affair
Mostafa M. Hassan
Mostafa Mahmoud Hassn

Dean
Prof . Dr . Yousef B. Mahdy

Assiut University
Faculty of Computers and Information

1/B № 0009452

Certificate

The Faculty of Computers and Information , Assiut University certifies that
Mr: **Ali Hussein Ahmed Bekhit**
Has been granted the Bachelor Degree of Computers and Information
Majoring in : Information Technology (**IT**) On **June 2008**

His total marks are **(3894)** out of **4500 (86.53%)**
With Accumulated Grade Point Average:(G PA) **(Distinction With Honor)**

Date of the Faculty's Council approval 18/7/2008
Date of the University's Council approval 24/7/2008

Note;- The language of Instruction in all courses, materials and exams was in English.

This certificate is issued upon his request

Registrar

Mostafa M. Hasan
Mostafa Mahmoud Hasan

Dean

Prof . Dr . Yousef B. Mahdy

Assiut University

2/E 0003718

Certificate

This is to certify that MR/ **Ali Hussein Ahmed Bekhit** was awarded the M.Sc Degree in Computers and Information (Information Technology) on 31 / 3 / 2013 from the Faculty of Computers and Information, Assiut University, Egypt. The title of the thesis was:

" A Robust Technique for Dynamic Routing in Wireless Sensor Networks based on Genetic Algorithm "

He studied the following courses in English Language and his grades were:

Subject	Grade
1-Modern Computer Architectures	Distinction
2- Data Compression	V. Good
3-Computer Forensics	V. Good
4-Elective Course (1)(Client/Server Applications Development)	V. Good
5-Elective Course(2)(Virtual Reality Systems)	Distinction

Assiut : 13/ 11 / 2013
Registrar Zeinab

Dean
Prof . Yousef B. Mahdy

Post Graduate

Assiut University

023336

This is to certify that MR/ **Ali Hussein Ahmed Bekhit** was awarded the Ph.D Degree in Computers and Information (Information Technology)from the Faculty of Computers and Information, Assiut University, Egypt.

Date of approval of Prof. Dr./ President of the university on behalf of the university Council on 5/12/2021

The title of the thesis was:

"Secured Framework for Internet of Things"

Assiut : 13/ 12 /2021

Registrar Zeinab Abdel Lateef Arafa

Dean

Taysir Hassan

prof. Taysir H. Abdel Hamid

شهادة

دورة إعداد المعلم الجامعي

تشهد كلية التربية جامعة أسيوط

بأن السيد علي حسين احمد بخيت

كلية حاسبات ومعلومات (مدرس مساعد بقسم تكنولوجيا المعلومات)

قد اجتاز بنجاح **الدورة الثانية والخمسين لإعداد المعلم الجامعي**

على أصول التدريس العامة والخاصة في المدة من ٥ -١٠/٩/٢٠١٥ تطبيقاً لنص المادة (٥٩)

من اللائحة التنفيذية لقانون تنظيم الجامعات.

EDUCATION
كلية التربية

كلية معتمدة من الهيئة القومية
لضمان جودة التعليم

جامعة أسيوط

عميد الكلية ورئيس الدورة

أ.د/ عادل رسمى حماد النجدى

وكيل الكلية لشئون خدمة المجتمع ومقرر الدورة

أ.د/ محمد رياض أحمد عبد الحليم