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## **Academic:**

### **2018 Sep – Aug 2022: Montreal University, Canada**

I have successfully completed PhD in Computer engineering in information systems security.

In my thesis, we have addressed two challenges associated with the current IDS for IoT: 1- improving the IDS capability to detect cyber-attacks in the application and network layers and 2- deploying IDS-based deep learning in low-power IoT devices with the demand of detection of attacks in real-time. We have proposed a method to integrate the IDS-based machine learning model with big data architectures (the Lambda architecture) to enhance the efficiency and security of the entire system. The originality of this thesis lies within two aspects: 1) The design of powerful IDS that allows the detection of attacks under heterogeneous and big data environments and 2) The purpose of an IDS based on hybrid and cascaded approaches to make it usable and efficient for low-powered IoT devices by introduced the Dynamic Trust Factor (DTF), which is a combination of social and Quality of Service (QoS) trust with federated learning.

### **2010 Sep – Aug 2012: Concordia University, Canada**

I have successfully completed Master of engineering in information systems security.

**Group projects:** I have done several projects in my filed some of them as a research projects and others as implementation projects such as:

- The Hash Function SHA-3(ECHO).
- Attack through Email Attachments Using PDF File Format.
- A Survey of Topic Modelling in Text Mining.
- Web Applications Security.
- Security and Privacy Issues in Cloud Computing.
- Improving Time Schedule of Booking Internet Service at Bell Company by Applying DMAIC Six Sigma Methodology.
  
- A Survey of User Privacy on Various Digital Environments.
  
- Credit Card Fraud investigation.
- Design And Implement a Peer-to-Peer Web Application That Allows File Sharing And Manipulation
- Project of Construction of Building (Vancouver Bentall Centre 5).
- Android Platform Malware Analysis.

## Modules included:

- Foundations of Cryptography
- Crypto Protocol and Network Security
- Middle ware and Application Security
- Security Evaluation Methodologies
- Security and Privacy Implications of Data Mining.
- Operating System Security
- Total Quality Project Management
- Total Quality Methods in engineering(Six Sigma).
- Database Security and Privacy
- Cybercrime Investigate
- Wireless Network Security

## Sep 2009 – Apr 2010: University of New Brunswick, Canada

Working as lab assistance:

- Java programming.
- Software Engineering.

## May 2008 - June 2009: Saint John College, Canada

I have successfully completed the English for academic purposes.

## Jun 2003- Apr 2007: Taif University

Bachelor degree in computer science.

## Modules included:

- Introduction to Internet Technology – HTML
  - Digital Photography
  - Multimedia Applications
  - Introduction to Programming – C++
  - Computer network.
  - Database programming.
  - Visual basic programming
  - Principle of Database
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## At work:

### Sep 2013 - until present: Al Baha University

Lecturer at the Faculty of Computer Science and information technology

### 2018 Sep – Aug 2022: Montreal University, Canada

I worked at the Computer and software engineering school as a lab assistant for undergraduate and postgraduate students. Also, for short training courses in the security field.

### Sep 2009–June 2010: Saudi Students Association in Fredericton

I was working in technical-support department. Duties included developing applications for clients as well as administrative tools for use within the department.

### June 2008–June 2009: Saudi Students Association in Saint John

I worked in technical department. The majority of this department is designing:

- Web Design.

## Committees:

- 1- Chairman the course equivalency committee Al Baha University
- 2- Member of Scientific Research Committee Al Baha University

**Participations:** As a potential reviewer for some journal such as

- 1- Recent advance in electrical & electronic engineering
- 2- Cluster Computing journal
- 3- Cybernetics and Systems journal
- 4- Journal of Data Science and Intelligent Systems
- 5- Wireless Personal Communications

**Language:**

- Arabic
- English

**Seminars:**

- 1- Online Mobile Mass Marketing Fraud, Canada's Competition Bureau, Concordia University.
- 2- How to "carbon date" digital information, Concordia University
- 3- Email Analysis for investigators: techniques and implementation, Concordia University.
- 4- Authentication and Securing Personal Information in an Untrusted Internet, Concordia University.
- 5- BUSINESS PROCESS MODELLING IN HEALTHCARE, Concordia University.
- 6- Botnet Reverse Engineering and Call Sequence Recovery, Concordia University.

**Conferences:**

- 1- International Conference on Artificial Intelligence and Big Data (ICAIBD)-2021
- 2- 2016 Montreal Tech Security Conference
- 3- 2012 Security Conference in Toronto.

**Certificate:**

- 1- Certificate of achievement: 32 hours graduate seminar in University teaching.

**Published paper:**

- 1- A cascaded federated deep learning based framework for detecting wormhole attacks in IoT networks - *Computers & Security Elsevier* -2022
- 2- Evaluation and Selection Models for Ensemble Intrusion Detection Systems in IoT – *IoT Journal* -2022\
- 3- A Deep Intrusion Detection System in Lambda Architecture Based on Edge Cloud Computing for IoT - *International Conference on Artificial Intelligence and Big Data (ICAIBD)-2021*
- 4- Hidden Markov Models (HMMs) and Security Applications. *International Journal of Advanced Computer Science and Applications*. (2016)
- 5- Android Platform Malware Analysis, · *International Journal of Advanced Computer Science and Applications*. (2015)
- 6- A Survey of Topic Modeling in Text Mining, *International Journal of Advanced Computer Science and Applications*. (2015)

## **Honors & Awards**

- 1- Scholarship from Montreal University 2018-2022
- 2- Excellence Award - Royal Embassy of Saudi Arabia Cultural Bureau - Canada  
Outstanding Research Poster 2021
- 3- Scholarship from Concordia University from 2015-2017
- 4- Excellence Award - Royal Embassy of Saudi Arabia Cultural Bureau - Canada 2011.