

Amera Al-Amery

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EDUCATION

- Doctor of Philosophy in Systems Science** *Aug.2019-July 2023*
State University Of New York, Binghamton, NY
- Master of Science in Computer Science** *Jan. 2008 - Feb. 2010*
Jordan University of Science and Technology, Irbid, Jordan
- Bachelor of Science in Computer Science** *Sep. 2004 - Jun. 2008*
Jordan University of Science and Technology, Irbid, Jordan

COMPUTER SKILLS

Programming Languages: Python, R, SAS, STATA, C++, C#, HTML/CSS, SQL Visual Basic,
General Applications: MS Office, Ubuntu, NS2 simulator, XV6, VirtualBox

RELEVANT COURSEWORK

Advanced Machine Learning (Linear Regression, Support Vector Machine, Logistic Regression, Decision Tree, Naïve Bayes, Neural Networks), Operations Research (Transportation Problem, Simplex Algorithm, Network Models), Advanced Topics in Health System (Feature Engineering, Performance Measurement, ML Models in healthcare), Multivariate Data Analysis (Logistic Regression, Linear Regression, LAD, SAS, Clustering, Data Analysis, ANOVA, MANOVA, PCA, Data Manipulation, Factor Analysis), Complex System (SEIR model, SIR model, System Stability Analysis), Advanced Topics in Network (Social Network Analysis using Networkx, Gephi), Advanced Engineering Analytics (PCA, LDA), Operating Systems (Thread Synchronizations, System Call Design, Scheduling Algorithms, CPU Vitalization, Memory Virtualization, Virtual Machine), Computer Networks (Wireless Sensor Networks, Routing Protocols, Wireless Ad Hoc Networks), Database Management System (SQL, Stored Procedures, ER), Computer Algorithms and Design (Time Complexity, 0/1 Knapsack Problem, Shortest Path Algorithms, Minimum Spanning Tree Algorithms), Internet of Things (Arduino IDE, Blynk app), Data Structure (Object Oriented Programming, Functions, Binary Trees, Queues, Linked Lists, Arrays), C++, Websites Design (ASP.net), Computer Architecture

PROFESSIONAL EXPERIENCE

Graduate Academic Coding Consultant, Binghamton University, USA *Aug. 2022 – Now*

- Holding office hours in person or virtually, to talk to students about their needs/interests, and direct them to the appropriate on-campus or online resources.
- Organizing one-hour workshops on coding topics for graduate students.
- Answering students' questions related to conducting statistical projects.

Graduate Assistant, Binghamton University, USA *Jun. 2021 – Now*

- Analyzing COVID-19 Datasets
- Building the Event-based model to analyze COVID-19 policy impact using STATA
- Building SEIRD model for Turkish Tuberculosis dataset
- Analyzing and Clustering the COVID-19 dataset for Middle East Counties
- Designing an infectious disease surveillance system for networked populations, using SEIR compartmental model along with a contact network.

Teaching Assistant, Binghamton University, USA *Aug. 2020 – Jun. 2021*

- Helping teachers in preparing exams and assignments
- Working with students during office hours on their assignments
- Giving lectures in R programming for students
- Grading students' assignments, exams, and quizzes
- Tracing students' attendance during the classes

Graduate Research Associate, Binghamton University, USA*Jun. 2020 – Aug. 2020*

- Writing SQL queries and stored procedures (Professional Billing, Hospital Billing)
- Doing analysis on claims workflow (Professional Claims, Hospital Claims)
- Analyzing SPRCS data workflow in Epic System
- Data validation on surgical procedures for Surgical Work List Business Intelligence application
- Received training on reporting application on Epic System
- Worked on Epic content guide for Research, Oncology, and Professional Billing Dashboards and Reports

Full Time Instructor, Laureate Vocational College, Riyadh, KSA*Jan. 2019 - Aug. 2019*

- Taught Websites Design using Google Site and MS-Office (Database Design, Create Tables, Create Forms, Create Reports, Simple Queries Using Wizard) for classes with up to 40 students and for up to 25 hours of in-class instruction per week
- Maintained positive rapport with all students and create a positive learning environment to adequately communicate lessons
- Enforced the student management and disciplinary policies of the Institute
- Coordinated with other IT Diploma Instructors and Curriculum Developers to integrate curricula and monitor student progress
- Performed clerical duties as required, relating to textbooks, instructional supplies, student reports and records, attendance reports

Full Time Instructor, Al Imam Islamic University, Riyadh, KSA*Aug. 2014 - Oct. 2015*

- Taught International Computer Driving License (ICDL) to 40 students' classes
- Taught General Topics in Computer Science (Information Technology, Computer Types, Computer Hardware)
- Taught MS-Office (Database Design, Create Tables, Create Forms, Create Reports)

Part Time Instructor, Jordan University of Science and Technology, Jordan*Sep. 2012 - Jan. 2013*

- Taught C++ (Data Types, Classes, Functions, Arrays) and HTML (HTML Tables, Links, Images, Marques, Forms) for classes with up to 40 students

Part Time Instructor, Albalqa'a Applied University, Irbid, Jordan*Feb. 2011 - Jan. 2012*

- Taught C++ (Data Types, Classes, Functions, Arrays) and HTML (HTML Tables, Links, Images, Marques, Forms) for classes with up to 40 students
- Performed clerical duties as required, relating to textbooks, instructional supplies, and student reports and records, attendance reports

MASTER THESIS**Routing Discovery Algorithm Using Parallel Chase Packet**

- Chasing packet technique is used with standard AODV routing protocol to end the fulfilled route requests. The chase packet is initiated by the source node and is broadcasted in parallel with the request packet. As soon as the destination is found the chase packet starts its work by trying to catch and discard the route request in the early stages before it broadcasts further in the network.
- Performance evaluation is conducted using simulation (NS2) to investigate the performance of the proposed scheme against the existing approach that uses the chase packet technique such as the Traffic Locality Route Discovery Algorithm with Chase (TLRDA-C). Results reveal that the proposed scheme minimizes end-to-end packet delays and achieves low routing request overhead

PUBLICATION

- Zeynep Ertem , Richard E. Nelson , Elissa , **Amera Al-Amery** et.al. Association between Changes in Masking Policies and Community Incidence of COVID-19: An Interrupted Time Series Analysis amongst US Counties. Clinical Infectious Disease, (Q1) (**Published 2022**)
- **Amera Al_Amery**, Jose L. Herrera, Zhanwei Du. Epidemic Surveillance Systems and Containment Strategies in Complex Networks. Chaos, Solitons and Fractals, (Q1) (**Submitted 2022**)
- **Amera Al_Amery**. Possibility of Predicting the COVID-19 Outbreaks Using Google Trends in the Middle East: A Retrospective Analysis. IISE Conference (**published 2023**)
- **Amera Al_Amery**. Multivariate Analysis of COVID-19 Pandemic for the Middle East Countries. IISE Conference (**published 2022**)
- Muneer Bani Yassein, **Amera Al_Amery**, & Yaser Khamayseh “Routing Discovery Algorithm Usin Parallel Chase Packet”, (IJACSA) International Journal of Advanced Computer Science an Applications (**published 2013**).

CERTIFICATES

- **Advanced Machine Learning**, Binghamton University-August 2022
- **Lean Six Sigma Green Belt**, Binghamton University-August 2022
- **Advance Probability and Statistics**, Binghamton University-January 2022

LIST OF REFERENCES

- **Zeynep Ertem**, Assistant Professor at Binghamton University, Ithaca, New York,