



Computer Science Department
Princess Sumaya University for Technology
E-mail: e.fayyouni@psut.edu.jo

Ebaa Fayyouni

Objective

To be a better version of myself, where my experience and proven accomplishments will enable me to positively contribute to enhancing the teaching culture from a scientific research perspective and to support and mentor females in science fields.

Summary of qualifications

Ability to teach and transfer the information clearly.
Ability to investigate problems in artificial intelligence, machine learning, graph theory and data science.
Ability to run and participate in big projects focusing on artificial intelligence graph theory and machine learning.
Ability to investigate problems in statistical and syntactical pattern recognition.
Ability to work independently and to incorporate with a group to solve any research problem.
Ability to communicate effectively and interface at all levels. Highly motivated, reliable, confident, and committed to professional standards. Excellent organizational and management skills.

Education

2003 - 2008	Carleton University	Ottawa, Ontario
Doctor of Philosophy (Ph.D.) (Computer Science)		
GPA: 12 out of 12, Rating: Excellent.		
<i>Winning University Medal on for outstanding graduate work</i>		
<i>Thesis: Novel Micro-Aggregation Techniques for Secure Statistical Databases.</i>		
2000- 2002	University of Jordan	Amman, Jordan
Master of Science (M.Sc.) (Computer Science)		
GPA: 3.81 out of 4, Rating: Excellent.		
<i>Thesis: Enhancing String Searching Algorithms.</i>		
1996- 2000	The Hashemite University	Zarqa, Jordan
Bachelor of Science (B.Sc.) (Computer Science)		
GPA: 3.77 out of 4, Rating: Excellent.		
<i>Project Title: Network Encyclopedia using Visual C++.</i>		

1. Alaa E Abdallah, **Ebaa Fayyumi**, Emad E Abdallah, Ahmad Qawasmeh, Islam Almalkawi. "Spherical-based routing protocols for three-dimensional MANET", *International Journal of Computing Science and Mathematics*. 16 (2), 125-135(2022).
2. Sahar Idwan, **Ebaa Fayyumi**, Hanin Hijazi and Izzeddin Matar. "COVID-19 Pandemic Endorses New Era of e-learning. Case Study: Hashemite University", *Journal of e-Learning and Knowledge Society*. 17 (2), 56-65(2021)
3. **Ebaa Fayyumi** and Sahar Idwan. "Factors Impacting Jordanian Women in Computing Case Study: Hashemite University", *Indonesian Journal of Electrical Engineering and Computer Science*.24:1130-1140 (2021)
4. Dana Halabi, **Ebaa Fayyumi**, and Arafat Awajan, "I3rab: A New Arabic Dependency Treebank Based on Arabic Grammatical Theory", accepted in *ACM Transactions on Asian and Low-Resource Language Information Processing*, 21(2):1-32 (2021)
5. **Ebaa Fayyumi** and Sahar Idwan, "Semantic Partitioning and Machine Learning in Sentiment Analysis", *Data* 6(6): 67 (2021).
6. **Ebaa Fayyumi** and Omar Alhuniti, "Recursive Genetic Micro-Aggregation Technique: Information Loss, Disclosure Risk and Scoring Index", *Data* 6(5): 53 (2021).
7. Dana Halabi, Arafat Awajan and **Ebaa Fayyumi**, "Syntactic Annotation in the I3rab Dependency Treebank", *The International Arab Journal of Information Technology (IAJIT)* 18(3A):281-392(2021).
8. Ismail Alfasfous, Amjad El-Sheikh, Anas Awad, Yahya Al-Degs, **Ebaa Fayyumi**, Jamal Dawoud, "Factorial investigation of cobalt retention by Ti and Fe oxides modified carbon nanotubes: Multivariate against univariate analysis", *Frontiers in Chemistry* (9):442 (2021).
9. Dana Halabi, Arafat Awajan, and **Ebaa Fayyumi**, "Improving Arabic dependency parsers by using dependency relations", 21 International Arab Conference on Information Technology (ACIT), 21-23 December 2020.(2020)
10. Alaa E. Abdallah, **Ebaa Fayyumi**, Emad E. Abdallah, Ahmad Qawasmeh, and Islam Almalkawi, "Spherical based routing protocols for three-dimensional MANET", accepted in *International Journal of Computing Science and Mathematics*.
11. **Ebaa Fayyumi**, Sahar Idwan, and **Heba AboShindi**, "Machine Learning and Statistical Modelling for Prediction of Novel COVID-19 Patients Case Study: Jordan", *International Journal of Advanced Computer Science and Applications* 11 (5): 122-126 (2020).
12. **Ebaa Fayyumi** and Omar Nofal, "Applying Genetic Algorithms on Multi-level Micro-Aggregation Techniques for Secure Statistical Databases", *15th ACS/IEEE International Conference on Computer Systems and Applications AICCSA 2018*.
13. Arafat Awajan, Dana Halabi and **Ebaa Fayyumi**, "Arabic LFG-inspired Dependency Treebank", *2017 International Conference on New Trends in Computing Sciences (ICTCS), Amman-Jordan 11-13 October 2017*.
14. Emad E. abdallah and **Ebaa Fayyumi**, "Assistive Technology for Deaf People Based on Android platform", *Procedia Computer Science. The 7th International Conference on Emerging Ubiquitous Systems and Pervasive Networks (EUSPN)*. 98:295-301 (2016).
15. **Ebaa Fayyumi**, Sahar Idwan, Khalid AL-Sarayreh, and Randa Obeidallah, "E-Learning: Challenges and Ambitions at Hashemite University", *International Journal of Innovation and Learning*. 17(4):470-485 (2015).
16. **Ebaa Fayyumi**, Sahar Idwan, Hiba Muhareb, Izzeddin Matar, Obaidah Rawashdeh, "L2CAP Based Prototype Media Streaming via Bluetooth Technology", *the International Journal of Networking and Virtual Organization*, 14(3):221-238 (2014).
17. Sahar Idwan, **Ebaa Fayyumi**, Hiba A Muhareb, Izzeddin Matar, Obaidah A Rawashdeh, "Achieving extended displays prototype via Wi-Fi direct technology", *High-capacity Optical Networks and Emerging/Enabling Technologies (HONET), 2014 11th Annual*.
18. Maen Hammad, Mustafa Hammad, Hani Bani-Salameh, and **Ebaa Fayyumi**, "Measuring Developers' Design Contributions in Evolved Software Projects", *Journal of Software*, 9(12):5005-5001 (2014).

19. **Ebaa Fayyumi**, Sahar Idwan, and Alaa Agha Karss, "Developing Fever Watcher-kit via Bluetooth Wireless Technology", *International Journal of Business Information Systems*, 16(4):431-445 (2014).
20. Khalid T. Al-Sarayreh, Kenza Meridji, **Ebaa Fayyumi**, Sahar Idwan, "A Novel Approach to Build a Generic Model of Photovoltaic Solar System Using Sound Biometric Techniques". *International Journal of Information Technology and Web Engineering (IJITWE)* 9(1):31-44 (2014).
21. Sahar Idwan, **Ebaa Fayyumi**, Feras Hanandeh, Hiba Muhareb, Bilal Dqghmash, "BlueThunder Overcomes The Current Drawbacks of The Bluetooth Wireless Technology", *International Journal of Business Information Systems*, 12(2): 194-209 (2013).
22. Kenza Meridji, Khalid T. Al-Sarayreh, **Ebaa Fayyumi**, and Sahar Idwan, "Integrated Model of Photovoltaic Solar System with the Sound Biometric Techniques", *Proceedings IEEE 2013 1st International Conference and Exhibition on the Applications of Information Technology in the Development of Renewable Energy processes and System IT-DREPS 2013*, Amman, Jordan May 29-31(2013).
23. B. J. Oommen, and **E. Fayyumi**, "On utilizing dependence-based information to enhance micro-aggregation for secure statistical databases", *Pattern Analysis and Application*, 16(1): 99-116 (2013).
24. **E. Fayyumi**, B. John Oommen, "A survey on Statistical Disclosure Control and Micro-aggregation Techniques for Secure Statistical Databases", *Software Practice and Experience*, 40(12): 1161-1188 (2010).
25. B. J. Oommen, and **E. Fayyumi**, "On Utilizing Association and Interaction Concepts for Enhancing Micro-Aggregation in Secure Statistical Databases", *IEEE Transactions on Systems Man and Cybernetics, Part B*, 40(1):198-207 (2010).
26. **E. Fayyumi**, and B. J. Oommen, "Achieving Micro-Aggregation for Secure Statistical Databases Using Fixed Structure Partitioning-Based Learning Automata", *IEEE Transactions on Systems Man and Cybernetics, Part B*, 39(5):1192-205 (2009).
27. B. J. Oommen, and **E. Fayyumi**, "An AI-Based Causal Strategy for Securing Statistical Databases Using Micro-Aggregation", *Proceedings of AI08, the 2008 Australasian Joint Conference on Artificial Intelligence*, Auckland, New Zealand, 3-5 December 2008, PP. 423-434, LNAI5360, Springer Verlag (2008).
28. B. J. Oommen, and **E. Fayyumi**, "Enhancing Micro-Aggregation Technique by Utilizing Dependence-Based Information in Secure Statistical Databases", *Proceedings of ACISP'08, 13th Australasian Conference on Information Security and Privacy*, Australia: Wollongong, 7-9 July 2008, PP. 404-418, Springer Verlag (2008).
29. B. J. Oommen, and **E. Fayyumi**, "A Novel Method for Micro-Aggregation in Secure Statistical Databases Using Association and Interaction", *the 9th International Conference on Information and Communications Security (ICICS'07)*, China: Zhengzhou, 12-15 Dec. 2007, PP. 126-140, LNCS 4861, Springer Verlag (2007).
30. **E. Fayyumi**, and B. J. Oommen, "A Fixed Structure Learning Automaton MicroAggregation Technique for Secure Statistical Databases", *Proceedings of PSD'06, Privacy in Statistical Databases*, Italy: Rome, 13-15 Dec. 2006, LNCS 4058, Springer Verlag (2006).
31. **E. Fayyumi**, and B. J. Oommen, "On Optimizing the k-Ward Micro-Aggregation Technique for Secure Statistical Databases", *Proceedings of ACISP'06, 11th Australasian Conference on Information Security and Privacy*, Australia: Melbourne, 3-5 July 2006. PP. 324-335., LNCS 4058, Springer Verlag (2006).
32. **E. Fayyumi**, and A. Al Jaber, "String Searching Multiple Reference Skip Algorithms", *ABHATH AL-YARMOUK: Basic Sciences and Engineering*, 2004, Vol. 13, No. 1, PP. 127-143.
33. **E. Fayyumi**, and A. Al Jaber, "Backward Exact String Searching Strategy", *ABHATH AL-YARMOUK: Basic Sciences and Engineering*, 2003, Vol. 12, No. 2A, PP.417-430.

**Work
experience**

Sep. 2023– Now **Princess Sumaya University** **Amman, Jordan**
Professor **for Technology**

Sep. 2016 – Sep.2018 **Princess Sumaya University** **Amman, Jordan**
Associate Professor **for Technology**

Teaching undergraduate courses: “Algorithm Design and Analysis” (2016- 2018) (2023-2024), “Data Structure and Introduction of Algorithm” (2016-2018), Theory of Computation (2023-2024).

Teaching graduate course: “Algorithm” (2nd 2017) (1st 2023).

Supervising Undergraduate Projects: 7erafji 2018.

Supervising Master student: **Omar Nofal** *June 2017- August 2018*

“Applying Genetic Algorithms on Multi-level Micro-Aggregation Techniques for Secure Statistical Databases”.

Co-supervising Ph.D. student: **Dana Halabi** *January 2017- Sptember 2021*

“Enhanced Arabic Statistical Dependency Parsing Based on Grab Theory and Machine Learning Techniques.”

Member of the Scientific Research Committee (2023-2024).

Member of the Accreditation and Quality Assurance Committee (2023-2024).

Member of the Study Plan Committee (2023-2024).

Member of the Social Activity Committee (2023-2024).

Member of the University Graduate Studies and Scientific Research Council (2016-2018).

June 2022-Sep 2023 **Hashemite University** **Zarqa, Jordan**
Professor

Sep. 2018 – June2022 **Hashemite University** **Zarqa, Jordan**
Associate Professor

Sep. 2015 – Aug. 2016 **Hashemite University** **Zarqa, Jordan**
Associate Professor

Oct. 2008 – Sep. 2015 **Hashemite University** **Zarqa, Jordan**
Assistant Professor

Vice-Dean Faculty of Graduate Studies 2022-2023

Vice-Dean Deanship of Academic Development and International Outreach 2021-2022.

Chairman of the Computer Science and Application Department in 2010-2011.

Chairman of the Computer Information Systems Department 2008-2009.

Teaching undergraduate courses: “Artificial Intelligence”, “Computational Theory”, “Data Structure”, “Discrete Mathematics and Application”, “Introduction to Algorithm and Design”, “Database Management System”, “Undergraduate Project”, “Introduction to the Microsoft office and Operating System” and “Fundamental Programming C++”.

Supervising Undergraduate Projects: ATL App 2018, Z-Aid 2016, Puzzle Game 2015, Estimation the Correlation Between Human Factor 2014, Communication with disabled people 2015, Twit Analysis 2015, Intelligent System for Tracking Objects 2014, Mobile Smart Home 2013, Intelligent System of Controlling Automatic Door 2013, Tracking attendance Model via Bluetooth 2013, Intelligent Prototype of Autonomous Parking 2012, Enhancing Compatibility of Bluetooth Technology using BlueThunder 2011.

Member of the University Research Council (2015-2016).

Member of the University Council (2014-2015).

Member of the E-learning University Council (2011-2013).

Member of the Women Empowerment at Faculty level (2014-2016) (2019-2023)
Head of the Women Empowerment at Faculty level (2018-2022).
Member of the Graduate Studies Plan at department level. (2008-2016)
Member of the Examination Undergraduate Project Committee. (2012-2010)
Member of the Scientific Research Committee at the Faculty and Department level (2008-2016)(2018-2023)
Member of Quality Assurance Committee at the Faculty and Department level (2010-2016)(2022-2023).
Member of E-learning Committee at the Faculty and Department level (2010-2016).
Member of Accreditation Committee at the Faculty and Department level (2009-2016)(2018-2023).
Member of Class Schedule Committee at the Faculty and Department level(2008-2015)
Member of Examination Committee at Faculty and Department level(2008-2014).
Member of Faculty Library Committee (2015-2016) (2021-2023)
Member of Faculty Simplified Procedures and Rules Committee at Faculty level (2012-2013).

Aug. 2006 – Aug.2008 School of Computer Science Ottawa, Ontario
Research Assistant

Investigating some problems in Secure Statistical Databases and developing new micro-aggregation techniques.

Conducting scientific research in the security and pattern recognition fields.

Preparing the power point presentations for the conferences. Reviewing some journal publications related to my field.

May 2008 – Jun. 2008 School of Computer Science Ottawa, Ontario
Contractor Instructor

Teaching undergraduate-courses titled “Discrete Mathematics and Application”.

Preparing the course notes and material, and tutorial sections.

Preparing the Midterm and the Final exams.

Grading the exams and marking student’s assignments.

Jan. 2003 – Dec. 2007 School of Computer Science Ottawa, Ontario
Teaching Assistance

Grading assignments and Midterm exam for the undergraduate students.

Holding office hours for the undergraduate students.

Running Tutorials for the undergraduate students.

The courses that I have been a TA for are COMP1805: “Discrete Mathematics and Applications” and COMP3005: “Databases Managements”.

Apr. 2004 – Aug.2008 Scheduling and Examination Services Ottawa, Ontario
Proctor

Proctor for regular examinations.

Proctor for the deferred examination which requires especial skills for monitoring several exams in the classroom.

Proctor for PMC students which requires more patience. Besides being able to accommodate the disabled student either by offering special programs such as JAWS, or by reading/ writing the exam to the student.

Proctor computer exams for the PMC and deal with all the technical problems that may be shown during the exam.

Nov. 2005 – Dec. 2005 Scheduling and Examination Services Ottawa, Ontario
Administrator Assistant

Maintaining the consistency and security of the PMC databases by creating and manipulating the students and the examinations databases.

Distributing the PMC exams in the available classrooms that satisfy students' accommodation.

Aug. 2002 – Dec. 2002 The Hashemite University Zarka, Jordan

Instructor

Teaching undergraduate courses (Databases, Programming Languages Java and C++, special topics: Security and usability).

Supervising final projects for two undergraduate students.

Grading assignments and the exams of my undergraduate courses.

Feb. 2000 – May. 2000 The Hashemite University Zarka, Jordan

Lab Administrator

Maintaining the security of the network.

Maintaining all computer workstations to run without any software problems. Recovering the entire damaged data in the computer.

**Conferences
Presentations,
Workshops,
training
Courses and
Seminars**

- Attend “How to qualify for AACSB Accreditation”, organized by the association of Arab Universities, March 13-14 2022. Amman MOVENPICK Hotel.
- Attend the “How to Prepare Capacity Building in the Field of Higher Education Proposals”, Erasmus+ Program of the European Union, InterContinental – Amman December 27, 2021.
- Attend the “Quality-oriented introduction of study programmes”, December 14-16, FH Munster University of Applied Sciences.
- Attend the “Higher Education Reform Day”, Erasmus+ Program of the European Union, Jordan University of Science and Technology, November 3rd, 2021
- Attend the first international scientific conference, “Women in Academia”, 20-21 January, 2021 via zoom.
- Organizer of Training Workshop “Design Thinking”, April 2019, Hashemite University.
- Organizer of Training Workshop “Develop Communication Skills for Information Technology Students”, March 2019, Hashemite University.
- Organizer and presenter in Dialogue Workshop “Empowering Girls in the Information Technology Sector”, February 2019, Hashemite University.
- Organizer and Co-chair in 2019 International Conference on New Trends in Computing Sciences (ICTCS).
- Training Course in SPSS, Princess Sumaya University for Technology, 2018.
- Workshop on Lowering the Barriers to Big Data Solutions, Princess Sumaya University for Technology, 2017.
- Workshop on Data Science, Princess Sumaya University for Technology, 2017.
- Attending Science Forum, Dead Sea, Princess Sumaya University for Technology, 2017.
- Co-chair in 2017 International Conference on New Trends in Computing Sciences (ICTCS).
- Attending Collage Scientific Day, Princess Sumaya University for Technology, 2016.
- Participating in the seventh National Technology Parade, Yarmouk University, Jordan, 2014
- Participating in the Workshop in Service Learning Tempus Project, London, and January 10th-17th, 2014.
- Participating in Peer Learning Workshop on Service Learning in Higher Education Concepts and Applications, Holiday Inn Hotel, Amman, December 1st, 2011.
- Workshop on E-Learning Reality and Ambition, Hashemite University, April 6th, 2010.
- Training Workshop on Writing Research projects Proposals, Hashemite University, and February 23rd, 2010.
- The First Jordanian Conference of E-Arab Vision, Arab Amman University, 26-27 January 2010.
- Workshop on New Research Strategies on Computing Technology, Hashemite University, April 22nd, 2009
- Workshop on Student Graduation Projects, Hashemite University, February 20th, 2009.
- The 2008 Australasian Joint Conference on Artificial Intelligence, Auckland, New Zealand, 3-5 December 2008.

- The 13th Australasian Conference on Information Security and Privacy (ACISP 2008), Australia: Wollongong, 7-9 July 2008.
- The 9th International Conference on Information and Communications Security (ICICS'07), China: Zhengzhou, 12-15 Dec. 2007.
- Privacy Statistical Databases Conference (PSD 2006), Italy: Rome 13-15 December 2006.
- Security in Statistical Databases, September 2006. Graduate Seminar for Ottawa Carleton Institute for Computer Science (OCICS).
- Micro-Aggregation Techniques for Secure Statistical Databases, August 2005. Faculty Seminar, Ottawa, Canada.
- The 11th Australasian Conference on Information Security and Privacy (ACISP 2006), Australia: Melbourne, 3-5 July 2006.
- ACM SIGPLAN 2006 Conference on Programming Languages Design and Implementation, Canada: Ottawa, June 15, 2006.

Volunteer Experience

- Member of the core group in the Project titled (Advancing Change in Learning and Teaching in Higher Education), and a focal point between the British Council and the Hashemite University September 2022- Now.
- Member of the Women's Security Alliance digital from 2021
- Reviewer at 18th IEEE International Conference on Machine Learning and Applications 2019 (ICMLA 2019), December 16-19, Boca Raton, Florida, USA.
- Reviewer at the International Conference on New Trends in Computing Sciences (ICTCS) in 2017 and 2019
- Consultant of Information Technology in the Association of Jordanian Women Academics AJWA .
- Member of the NLP research centre at Princess Sumaya University for Technology.
- The focal point of the Hashemite University at EU Project Empowerment UN Women in Jordan (Cisco Academy.)
- Member of the Association of Jordanian Women Academics.
- Member of the Arab Union for Specialized Women.
- Member of the Jordanian Association of Scientific Research and Computer Association.
- Reviewer in some International Journals such as Information Sciences _ Elsevier and Pattern Recognition.
- Reviewer at 11th International Conference on Machine Learning and Application (ICMLA 2012), Boca Raton, Florida, USA, December 12-15(Member of the program committee).
- International Conference on Computer, Information and Telecommunication Systems (CITS2012), Hashemite University, May 2012 (member in the organization committee)
- The Role of Information Technology in Building-Up The Knowledge Economy In Jordan, Hashemite University, April 2011 (member of the organization committee).
- ACM SIGPLAN 2006 Conference on Programming Languages Design and Implementation, Canada: Ottawa, June 15, 2006 (member of the Welcoming Committee).
- Let us Talk Science, Carleton University, Ottawa, Canada, 2005-2006 (Member of Program committee).

Scholarships and Awards

Name	Location of Tenure	Period Held
The Second Prize in PARADE 2016 Z-Aid	AL-Ahliyya Amman University	2016
The First Prize in PARADE 2015 Communication with disabled people	University of Jordan	2015
The Second Prize in PARADE 2015 Puzzle Game	University of Jordan	2015
The Best Renewable Energy Undergraduate Project in the IT SAF 2013.	Petra University	2013
Teaching Award	Hashemite University	2012
E-learning Participation Award	Hashemite University	2009
University Medal of outstanding graduate work	Carleton University	2008
The Hashemite University, Graduate Scholarship	Carleton University	Sep.2003-Aug. 2006
The Hashemite University, Graduate Scholarship	University of Jordan	Sep.2000-Aug. 2002
University's Honor List	Hashemite University	Sep .199-Aug. 1999
Faculty's Honor List	Hashemite University	Winter 1999
Faculty's Honor List	Hashemite University	Fall 1998
President's Award, Top of Undergraduate Class	Hashemite University	Sep. 1998
University's Honor List	Hashemite University	Sep.1998-Aug. 1997
Faculty's Honor List	Hashemite University	Winter 1997
Faculty's Honor List	Hashemite University	Fall 1997
President's Award, Top of Undergraduate Class	Hashemite University	Sep. 1997
Faculty's Honor List	Hashemite University	Fall 1996

References

Upon request.