AMIRA GHENAI

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RESEARCH INTEREST

Social Media Analysis, Data Science and Data Analytics, Fairness in Artificial Intelligence, Natural Language Processing, Accessibility for Older Adults, Human Computer Interaction

TEACHING INTEREST

Databases, Network Fundamentals, Programming Principles, Data Analytics, Data Structure

SUMMARY OF QUALIFICATIONS

Publications Well-established research track record with notable conference/journal publications
Teaching taught two computer science introductory course, hold the "Fundamentals of University Teaching" certificate, will be teaching "Introduction to programming" course in Winter 2021
Awards & Fellowships AGE-WELL Graduate Student and Postoctoral Award in Technology and Aging (15% acceptance rate), Qatar Research Leadership Program Doctoral Fellowship 2012-2018
Industry Interned for eight months as a *Data Scientist* in Thomson Reuters Labs, had several research collaborations with industry (e.g. Google, Al-Jazeera News)
Service Served as program committee member and reviewer for top-tier conferences and journals, serving as Program Committee Chair of the Diversity, Inclusively, and Accessibility in ICWSM'2021
Spoken Languages English (Bilingual), French (Intermediate)

EDUCATION

PhD in Computer Science   *Dec 2019*
Department of Mathematics, University of Waterloo - Waterloo, ON
PhD thesis: *Health Misinformation in Search and Social Media*
URL: https://uwspace.uwaterloo.ca/handle/10012/15268
Supervisors: Dr. Charles L. A. Clarke, Dr. Mark D. Smucker
Relevant Courses: Applied Machine Learning, Search and Recommendation, Challenges in Big Data Quality, Data Structures and Standards in Health Informatics

Masters of Science in Computing (Software Engineering) with *Merit*   *Nov 2013*
Department of Computing, Imperial College London - London, UK
Disertation title: *Exploring Trust-Aware Neighbourhood in Trust-based Recommendation*
URL: https://arxiv.org/abs/1608.05380
Supervisor: Dr. Moustafa M.Ghanem
Relevant Courses: Software Engineering, Distributed and Parallel Algorithms, Advanced Databases

Bachelor of Science in Computer Engineering with *Honors*   *Jan 2011*
Department of Computer Science and Engineering, Qatar University - Qatar
Disertation title: *Data Analysis Using MapReduce Programming Model on the Cloud*
URL: https://cs.uwaterloo.ca/~aghenai/assets/publications/design_project.pdf
Supervisor: Dr. Qutaibah M. Malluhi
Relevant Courses: Cloud Computing, Computer Networks, Computer Interfacing
Member of Vice President list, Member of the dean's list

HONORS & AWARDS

Research Grants

- Research Development Grant, Ted Rogers School of Management   2022
- MITACS Globalink Research Internship (for two international students)   2022

Scholarships and Fellowships [1]

- AGE-WELL Graduate Student and Postdoctoral Award in Technology and Aging,   2020 – 2021
  $20,000 over 1 year (Acceptance rate **15%**)
- Waterloo University Graduate Research Studentship, $13,000 over two terms   2019
- Qatar Research Leadership Doctoral Fellowship, Qatar Foundation, $200,000 over 4 yrs   2014 – 2018
- Qatar Research Leadership Program Scholarship, Qatar Foundation, $50,000 over 1 yr   2012 – 2013
- High School Excellence Scholarship, Algerian Embassy in Qatar, $40,000 over 5 yrs   2006 – 2011

Travel Awards

- ACM SIGIR Travel Award, ACM   2017
- Travel Awards, Department of Computer Science, Waterloo University   2017
- Travel Awards, Qatar Computing Research Institute, Qatar   2017
- Computational Social Science Summer School Travel Award, Waterloo University   2017
- Travel Award for Grace Hopper Celebration, WiCS, Waterloo University   2016
- MLDA Symposium Travel Award, Qatar Foundation   2015

EMPLOYMENT

Assistant Professor   *Jan 2022 – present*

Ted Rogers School of Management - Toronto, ON

Full-time, Tenure-Track

Develop and teach undergraduate and graduate courses, conduct research and produce peer-reviewed publications, establish and maintain an independent, externally funded research program, contribute to the life of the School through collegial service.

Postdoctoral Fellow   *Feb 2020 – Oct 2020*

Accessible Computing Technologies Research Group, McGill University - Montreal, QC

Supervisor: Dr. Karyn Moffatt

Using qualitative methods to study older adults' challenges with online misinformation, to measure older adults' exposure to COVID-19 misinformation, and to design a platform that helps Canadian older adults deal with misinformation

Sessional Lecturer   Jan 2021 – Apr 2021

Department of Management Sciences - Faculty of Engineering, University of Waterloo, ON

Course title: "Introduction to Computer Programming" (remote)

Design the course curriculum including the learning outcomes, develop and implement lesson plans and activities through distance or virtual learning (asynchronous video lectures and synchronous office hours and problem solving sessions), use appropriate instructional strategies, and resources for remote learning (online discussion boards, virtual classrooms etc.), conduct Outcomes-Based Assessment (OBA) to measure the course assessments against attributes for accreditation, as developed by the Canadian Engineering Association Board (CEAB), manage the workflow of the TAs to grade assignments, hold office hours, and conduct tutorials

Researcher (Part-time/Remote)   *May 2020 – Dec 2020*

Ryerson University Social Media Lab - Toronto, ON

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[1] Scholarship values are approximated

Supervisors: Dr. Anatoliy Gruzd & Dr. Philip Mai
Identifying COVID-19 vaccine-related misinformation messages on Twitter and building the retweet prorogation patterns to explore the misinformation spread on Twitter

Lab Instructor (Instructional Apprentice - IA)   Fall 2017, Winter 2017
Department of Computer Science, Faculty of Mathematics, University of Waterloo, ON
Conducted tutorials for the basic concepts in computer science course using Python. Among the topics covered: strings and lists, recursion, searching, sorting and graph theory, taught labs for the foundational concepts in computer science course using Racket. Among the topics covered: design recipe, compound data structures, lists, recursion, binary and general trees, assisted students with assignments and grade and proctor mid-term and final exams, received an excellent course evaluation as lab instructor

Teaching Assistant - TA   Spring 2017, Fall 2016
Department of Computer Science, Faculty of Mathematics, University of Waterloo, ON
Graded ten assignments and two exams per term for the undergraduate course "propositional logic", among the topics covered in this course are: syntax and semantics of propositional logic, natural deduction, soundness and completeness, analysis of functional programs and program verification, received an excellent course evaluation as teaching assistant

Research Associate   Jan 2013 – Jul, 2013
Qatar Computing Research Institute, Qatar Foundation - Qatar
Supervisor: Dr. Carlos Castillo
Collected news related tweets using Twitter API and tracked tweets news propagation on Twitter

Research Assistant   Sep 2011 – Jun 2012
Qatar Computing Research Institute, Qatar Foundation - Qatar
Supervisor: Dr. Sihem Amer-Yahia
Clustered Al-Jazeera news articles based on topics using LDA and Open-Calais tool, used Mechanical-Turk for evaluating the clusters, and built a dashboard to visualize the articles dynamics which helps journalists gather insights about topics

Undergraduate Research Assistant   Oct 2009 – Aug 2011
Department of Computer Science and Engineering, Qatar University - Qatar
Supervisor: Dr. Qutaibah Malluhi
Used map reduce programming model to build an inverted index of text documents and built a interractive Java user interface to search for specific keywords

Peer Tutor   Sep 2008 – Jun 2009
Student Support Learning Centre, Qatar University, Qatar Tutored basic and advanced Math and Calculus subjects, tutored basic data structure courses using Java and C++ as programming languages, presented the Student Support Learning Centre in the National Tutoring Association conference

TEACHING

Guest Lecturer
School of Information Studies - Faculty of Arts, McGill University, QC   Nov 2020
- Title: The think-aloud method for system usability analysis
- Course: Usability Analysis and Assessment (graduate course)

Department of Mathematics, University of Waterloo - Waterloo, ON   Oct 2018
- Title: Fake Cures: User-centric Modeling of Health Misinformation in Social Media
- Course: Topics in AI/Trust and Online Social Networks (graduate course)

Fundamentals of University Teaching program   Mar 2017
Centre For Teaching Excellence (CTE), University of Waterloo, ON

- Received the *Fundamentals of University Teaching* certificate accredited by the *Canadian Educational Developers Caucus*
- Participated in 6 university teaching workshops offered by CTE including: teaching methods, classroom delivery skills, effective lesson plans, and giving quality feedback to enhance teaching skills
- Conducted three microteaching sessions aimed to practice different teaching skills
- Delivered three mini lessons to practice giving and receiving feedback on teaching methods

TRAINING OF HQP

Undergraduate Student Supervisor   June 2022 – Sep 2022
Aarat Satsangi, Mitacs Globalink Research Internship

- Research topic: Analyzing user-generated YouTube videos to understand ageing, old age and older adults

Undergraduate Student Supervisor   June 2022 – Sep 2022
Saksham Thareja, Mitacs Globalink Research Internship

- Research topic: Analyzing user-generated videos: Images of older adults in YouTube

Graduate Student Supervisor   Sep 2020 – Aug 2021
Maria Tippler, Graduate research assistant of Dr. Karyn Moffatt

- Research topic: COVID-19 misinformation and older adults
- Advised on data analysis and online survey design approaches

Undergraduate Student Supervisor   Mar – Jul 2020
Xueguang Ma, Undergraduate research assistant of Dr. Robin Cohen

- Research topic: Fake reviews and older adults
- Supervised research tasks; set goals; monitored productivity; and provided constructive feedback

PUBLICATIONS

Refereed Journal Articles

[**J.1**] Robin Cohen, Karyn Moffatt, **Amira Ghenai**, Andy Yang, Margaret Corwin, Gary Lin, Raymond Zhao, Yipeng Ji, Alexandre Parmentier, Jason PNg, Wil Tan and Lachlan Gray (2020). Addressing Misinformation in Online Social Networks: Diverse Platforms and the Potential of Multiagent Trust Modeling. the Information journal - Special issues: Tackling Misinformation Online.

Refereed Conference papers[2]

[**C.6**] **Amira Ghenai**, Robin Cohen, Karyn Moffatt, Xueguang Ma, Andy Yang, Yipeng Ji (2021). E-Health for Older Adults: Navigating Misinformation. The International Conference on Information and Communication Technologies for Ageing Well and e-Health.

[**C.5**] **Amira Ghenai**, Mark D. Smucker and Charles L. A. Clarke (2020). A Think-Aloud Study about Medical Misinformation in Search Results. The 5th ACM **CHIIR** Conference on Human Information Interaction and Retrieval, Vancouver, Canada. (37%)

[**C.4**] **Amira Ghenai**, Yelena Mejova (2018). Fake Cures: User-centric Modeling of Health Misinformation in Social Media. The 21st ACM **CSCW** Conference on Computer-Supported Cooperative Work and Social Computing, New York City's Hudson River (Jersey City). (27%)

[**C.3**] **Amira Ghenai**, Yelena Mejova (2017). Catching Zika Fever: Application of Crowdsourcing and Machine Learning for Tracking Health Misinformation on Twitter. The 5th IEEE **ICHI** International Conference on Healthcare Informatics. Park City, Utah. USA. (27%)

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[2]Where available, acceptance rates are provided in brackets.

[C.2] Frances Pogacar, **Amira Ghenai**, Mark D. Smucker, Charles L. A. Clarke (2017). The Positive and Negative Influence of Search Results on People's Decisions about the Efficacy of Medical Treatments. The 3rd ACM **ICTIR** International Conference on the Theory of Information Retrieval, Amsterdam. Netherlands. (54%)

[C.1] Sihem Amer-Yahia, Samreen Anjum, **Amira Ghenai**, Aysha Siddique, Sofiane Abbar, Sam Madden, Adam Marcus and Mohammed El-Haddad (2012). Maqsa: a system for social analytics on news. The 2012 ACM **SIGMOD** International Conference on Management of Data (pp. 653-656), Arizona. USA. (17%)

Doctoral Consortium

[D.2] **Amira Ghenai** (2017). PhD Track: Health misinformation in search and social media, ACM Digital Health, London. UK

[D.1] **Amira Ghenai**, (2017). Doctoral Consortium: Health misinformation in search and social media, SIGIR'17, Tokyo. Japan

Posters/Workshops

[P.2] **Amira Ghenai**, Mark D. Smucker and Charles L. A. Clarke (2019). A Think-Aloud Study about Medical Misinformation in Search Results. ACM SIGIR 2019 Workshop on Reducing Online Misinformation Exposure (ROME), Paris, France.

[P.1] **Amira Ghenai**, Daniel J. Lizotte (2015). What makes a review useful, funny or cool on Yelp.com? Machine Learning and Data Analytics Symposium MLDAS 2015, Doha. Qatar

Unrefereed papers

[U.3] **Amira Ghenai**, Moustafa M.Ghanem (2016). Exploring Trust-Aware Neighbourhood in Trust-based Recommendation. arXiv preprint arXiv:1608.05380

[U.2] **Amira Ghenai**, Eldar Khalilov, Pavel Valov, Charles L. A. Clarke (2015). WaterlooClarke: TREC 2015 Clinical Decision Support Track. TREC Conference 2015, Maryland, USA

[U.1] **Amira Ghenai**, Nabiha Asghar (2015). Automatic Discovery of Functional Dependencies and Conditional Functional Dependencies: A Comparative Study. University of Waterloo

INVITED TALKS

- **Designing Systems to Better Address the Problem of Misinformation** Mar 2020
  Women in Data Science Conference. Ottawa, ON
- **A Think-Aloud Study to Understand Factors Affecting Online Health Search** Oct 2019
  School of Information Studies, McGill University. Montreal, QC
- **The Positive and Negative Influence of Search Results on People's Decisions about the Efficacy of Medical Treatments** Dec 2017
  Research collaboration talk between Waterloo university and Google Inc. Mountain View, CA
- **Health Misinformation in Search and Social Media** Aug 2017
  ACM SIGIR'17 conference, Tokyo. Japan
- **Health Misinformation in Search and Social Media** Jul 2017
  ACM Digital Health'17 conference, London. UK
- **Zika Misinformation Tracking in Social Media** Sep 2016
  Qatar Computing Research Institute, Doha. Qatar
- **What Makes a Review Useful, Funny or Cool on Yelp.com** Nov 2015
  The Second Machine Learning and Data Analytics (MLDAS) Symposium, Doha. Qatar
- **Discovering Conditional Functional Dependencies** Mar 2015
  University of Waterloo. ON

PROFESSIONAL SERVICE

- **Reviewer**, Graphics Interface' 2022 (GI)   May 2022
- **Dataset Track co-Chair**, ICWSM'2022   Mar 2022
- **Reviewer**, TheWebConf 2022 (WWW)   Dec 2021
- **Reviewer**, Computers in Human Behavior Journal   Nov 2021
- **Program Committee Chair**, Diversity, Inclusively, and Accessibility, ICWSM'2021   Jun 2021
- **Journal Reviewer**, The Big Data & Society, SAGE Journal   Dec 2020
- **Program Committee Member**, ACM CHIIR 2021   Oct 2020
- **Program Committee Member**, TheWebConf 2021 (WWW)   Oct 2020
- **Journal Reviewer**, The Journal of Medical Internet Research (JMIR)   Sep 2020
- **Conference Reviewer**, ACM CSCW   Jun 2020
- **Journal Reviewer**, The Journal of Medical Internet Research (JMIR)   Jun 2020
- **Program Committee Member**, ACM Conference on Digital Health   Jul 2019
- **Program Committee Member**, ACM Conference on Digital Health   Jul 2018
- **Conference Reviewer**, The 27th World Wide Web Conference   Apr 2018
- **Program Committee Member**, ACM Conference on Digital Health   Jul 2017

UNIVERSITY SERVICE AND LEADERSHIP EXPERIENCE

- **Committee Member**, Women in Computer Science, University of Waterloo   Jan 2015 – Apr 2017
- **Judge** in a programming competition for grade 8 girls, University of Waterloo   Oct 2015
- **Member**, Student Scientific Research Club, Qatar University   Jan 2007 – Dec 2010
- **Volunteer**, The 17th International Conference on Telecommunications 2010   Apr 2010
- **Volunteer**, The 11th International Conference on Relational Methods in CS   Nov 2009
- **Orientation Volunteer**, Qatar University Orientation Day, Qatar   Aug 2009

MEDIA APPEARANCE

- **Search results influence people's decisions about treatment effectiveness**   Mar 2018
  Article published by Joe Petrik. Cheriton School of Computer Science News
- **Think twice before consulting Dr. Google, researchers say**.   Apr 2018
  Interview with Kelly Crowe. CBC NEWS
- **Is searching for health information online a good idea?**.   Apr 2018
  Interview with Su-Ling Goh. Global News - Edmonton
- **Health misinformation in online search**.   Apr 2018
  Interview with Mike Farwell. 570 News - The Mike Farwell Show

INDUSTRY/INTERNSHIP EXPERIENCE

- **Data Scientist Intern**, Thomson Reuters Labs - ON   Feb – Apr 2018
  Applied entity extraction to legal documents (extract main parties, term duration, etc.).
  Used fuzzy matching techniques to find targeted entities.
  Participated in communicating findings to stakeholders using visualization tools.
- **Service Desk Agent**, Hewlett-Packard - Qatar   Apr – Aug 2011
  Troubleshooted IP Telephony phones & managed web mail server issues and user accounts
  Remotely downloaded desktop software, and troubleshooted Enterprise Resource Planning (ERP) system
- **Intern**, Al-Jazeera Network - Qatar   Jul – Aug 2009
  Configured IP Telephone administration, local area implementation
  Actively participated in cover switching, cabling and server farm migration preparation

PROFESSIONAL DEVELOPMENT

Windows Forms with C#, APTECH Centre, Qatar | 2012
CCNA Exploration: I, II, III, IV, Cisco Networking Academy, Qatar | 2009-2011
IBM Cloud Computing Training, IBM, Qatar | 2009

PROFESSIONAL MEMBERSHIP

Member, Association for Computing Machinery (ACM) and ACM Special Interest Group on Information Retrieval (SIGIR)