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RESEARCH INTERESTS

Computational Social Science
Data Science and Data Analysis
Network Analysis and Visualisations

EDUCATION

- 09/2018 – 02/2023 **PhD** in Informatics, The University of Edinburgh (UoE), UK
Thesis: Religious Polarisation over Social Networks
Advisors: Dr Walid Magdy and Dr Maria Wolters
- 09/2017 - 08/2018 **MSc (First Class)** Artificial Intelligence, The University of Edinburgh (UoE), UK
Thesis: Analysing Online Cultural Disengagement in the Arab Twittersphere
Advisor: Dr Walid Magdy
- 09/2012 - 07/2017 **B.Sc. (Hons)** Computer Engineering, Qatar University, Qatar
Graduation Project: Signal Processing with Real-Time Response Application on FPGA SoC.
Advisor: Prof Abbas Amira

WORK EXPERIENCE

- 02/2024– current **University Teacher**, School of Informatics, UoE
Aim: Teaching the Text Technologies for Data Science (TTDS).
Task: Prepare and deliver the TTDS course material and assessment to MSc and UG4/5 students.
- 08/2023– 02/2024 **Postdoctoral Research Associate (PDRA)**, Alan Turing Institute's Defence and Security Programme, "Modelling Audience Interactions" (A successful grant funded by UK gov.)
Project: PIs: Dr Walid Magdy and Dr Björn Ross
Aim: To develop a user-friendly tool that combines state-of-the-art AI techniques to model and analyse the narratives of user interactions.
Task: Develop an AI system that collects, stores, processes, and analyses social media contents.
- 08/2022– 08/2023 **Postdoctoral Research Associate (PDRA)**, School of Informatics, UoE (Funded by: Scottish gov.)
Project: PIs: Dr Walid Magdy and Dr Laura Cram.
Aim: To compare human-generated data on Twitter from enormous online datasets to understand the societal and individual responses to sensitive topics. The project integrates AI techniques for efficient indexing, processing, visualization, and reporting within a user-friendly system.
Task: Develop an AI system that collects, stores, processes, and analyses social media contents. Also, to utilize the developed tool in computational social science studies.
- 01/2022– 08/2022 **Research Fellow (Project: Telling Good Stories)**, School of Social & Political Science, UoE
Project: PI: Dr Julie Brownlie (School of Social & Political Science)
Aim: To compare human-generated data on Twitter to long-term historical data.
Task: Collect, store, process, and analyse tweets relevant to narratives of compassion and support during challenging times such as the Covid-19 pandemic. Compare this social media content with long-term historical published data.

- 03/2021 – 11/2021 **Research Assistant**, Digital Influence & Intelligence Lab, Informatics & SSPS, UoE
 Project: *Aim: Build an online (live) social media analysis framework for monitoring public opinion over various topics of interest, e.g., Brexit, Scottish referendum, and Covid-19 pandemic.*
Task: A member of a four-person team whose expertise covers both computer and political sciences. My responsibility was to build the backend of the platform, which includes tweets streamer, language identification, media detection, geo-location detection, and integration of multilingual sentiment analysis, and enabling fast scalable live search using Solr.
- 08/2020 – 03/2021 **Research Assistant**, (Project: Huawei), ILCC, University of Edinburgh, UK
 Project: *Aim: Build an internal platform for Huawei to monitor public reviews on their products online.*
Task: A member of a team of three, my role was to build an online scalable and modular-based system to collect, process, index, and report multilingual (European Languages) data from Twitter.
- 01/2020 – 08/2020 **Remote research Assistant**, (Project: Yemen Crisis) United Nations (UN), New York, US
 Project: *Aim: Analyse the crisis in Yemen from social media.*
Task: Build a platform for collecting tweets about and from Yemen in Arabic to identify the locations and groups that are the most in-need so that the UN can provide immediate help.
- 08/2018 – 08/2022 **Teaching Assistant**, School of Informatics, University of Edinburgh, UK
 Main Duties:
 - Co-supervising master's degree students (2018 to 2023).
 - Tutoring, Lab demonstrating, and Marking (in person and online sessions) for the courses:
 - Text Technologies for Data Science,
 - Accelerated Natural Language Processing (ANLP),
 - The Human Factors,
 - Case Studies in Design Informatics,
 - Introduction to Java Programming.

EXPERTISE

- Data Science
Statistical data analysis, sensitive data handling, and data indexing with Solr and MongoDB.
- Computational Social Science
Qualitative and quantitative analysis methods for answering social/political research questions.
- Social Network Analysis and Visualisations
Networks analysis, communities' detection, and visualization.

SKILLS

- Specialist in handling real-world big data and quantitative and qualitative analysis approaches.
- Teaching and assisting in teaching large classes (250+).
- Natural Language Processing techniques such as topic modelling, name entity detection and sentiment analysis.
- Backend and frontend development with Python, SQLAlchemy, React JS and Node JS.
- Skilled in Data Visualisation with Python libraries (Plotly, Matplotlib, Seaborn, Altair...etc.), and SNA.
- Building and managing data indexing systems and search engines including Apache Solr.
- OOP using major languages and platforms mainly with Python and Java.
- Competent in communication skills, including oral presentation and documented reports.
- A project-oriented and teamwork-oriented hard worker.

TEACHING INTERESTS

- Data Science
- Text Technologies
- Natural Language Processing

TALKS/LECTURES

- *Invited lecture*: Social network analysis workshop for students, Edinburgh Future Institute, Edinburgh, Mar 2024
- *Invited lecture*: Twitter Data Collection Workshop for Engineering students, SUNY New Paltz, NY, USA, Mar 2022
- *Conference talk*: Atheists versus Theists: Religious Polarisation in Arab Online Communities. *24th ACM Conference on Computer-Supported Cooperative Work and Social Computing*, Oct 2021
- *Conference talk*: Arabs and Atheism: Religious Discussions in the Arab Twittersphere. *Social Informatics. SocInfo*, Doha, Qatar, Nov 2019

PUBLICATIONS

1. El Alfy, A., Quigley, J., Tang, L., **Al Hariri, Y.**, & Weber, O. (2024). Sustainability tweeting triumphs during the COP events: analyzing environmental, social, and governance (ESG) communication on Twitter. *Journal of Asia Business Studies*.
2. **Al Hariri Y.**, Magdy W., Wolters, M. K. (2021), 'Atheists versus Theists: Religious Polarisation in Arab Online Communities'. *Proceedings of the ACM on Human-Computer Interaction*, vol 5, CSCW2, Article 361 (October 2021), 28 pages. <https://doi.org/10.1145/3479505>
3. **Al Hariri, Y.**, Magdy, W., Wolters, M. (2019). Arabs and Atheism: Religious Discussions in the Arab Twittersphere. In: *Social Informatics. SocInfo 2019. Lecture Notes in Computer Science*, vol 11864. Springer, Cham. https://doi.org/10.1007/978-3-030-34971-4_2
4. Mhaisen, N., Abazeed, O., **Hariri, Y. A.**, Alsalemi, A., & Halabi, O. (2018). Self-Powered IoT-Enabled Water Monitoring System. In *Proceedings of the 2018 International Conference on Computer and Applications (ICCA)* (pp. 41-45). (IEEE). <https://doi.org/10.1109/COMAPP.2018.8460401>
5. Shata, O., Mhaisen, N., Abazeed, O. & **Al Hariri, Y.** (2015). Teaching Database Management Systems in Higher Education: An Efficient Approach for Introductory Courses. *Sylwan journal*. (11). <http://www.sylwan.ibles.org/syl/index.php/archive/part/159/11/1/>

RESEARCH SERVICES

- Program Committee: ACL-SRW 2023, ICWSM 2024, ICWSM 2023
- Reviewing for conferences: ICWSM, CSCW 2022, CSCW 2023, CHI, ASONAM and Mensch und Computer.
- Reviewing for the journals: OSNEM and SNAM

AWARDS & ACHIEVEMENTS

- PDRA Awarded the Alan Turing Institute's Defence and Security Programme grant: "Modelling Audience Interactions". PIs: Dr Walid Magdy and Dr Björn Ross (2023).
- PhD scholarship at the ILCC, University of Edinburgh (2018).
- Oryx GTL Academic Excellence Award for Graduating with Distinction (2017).
- Microsoft Imagine Cup – Middle East and North Africa (2017).

REFERENCES:

Walid Magdy, PhD

Reader at the School of Informatics, the University of Edinburgh, UK
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Bjorn Ross, PhD

Lecturer in Computational Social Science, the University of Edinburgh, UK
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Maria Wolters, PhD

Research Group Lead, Social Computing, OFFIS Institute for Informatics, Germany.
Reader in Design Informatics, the University of Edinburgh, UK
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