Abdulaziz Alhamadani

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Northern Virginia Center, Virginia Tech
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Highlights

Research: 1 journal article, 12 conference papers
Leadership: Graduate Student Assembly (GSA) President
Best paper Award ASONAM 2022
The graduate Student Service Award of the Computer Science Department

Research Interests

Machine learning real-world applications, Data Mining, Deep Learning, Spatial event detection & forecasting, Text Classification, Text Summarization and Event Detection (NLP), Machine Learning ethics.

Education

Ph.D. Candidate Computer Science, Virginia Tech, Falls Church, **2019-Current**
M.S. Computer Science, University of New Hampshire, Durham, New Hampshire, 2015
M.A English & European Literature, King Abdulaziz University, Jeddah, Saudi Arabia 2010
Diploma of Education, Umm Al-Qura University, Makkah, Saudi Arabia2007
B.A. English Language (Linguistics and Literature), Umm Al-Qura University, Makkah, Saudi Arabia, 2004

Professional Experience

Graduate Teaching Assistant (GTA), Dept. of Computer Science, Virginia Tech, 12/2022 – Present
Technology-enhanced Learning and Online Strategies Support (TLOS), Virginia Tech, 1/2020 – 12/2022
Android Bootcamp – Android App Developer, TurnToTech, Manhattan, New York 7/2017 – 12/2017
Healthcare information System Database Developer, East Jeddah Hospital, Jeddah, Saudi, 9/2016 – 2/2017
Database Developer Intern, Arab countries Pilgrims Establishment, Makkah, Saudi Arabia, 6/2015 –10/2015
English Teacher, Scientific Institute, Imam Mohammad Ibn Saud Islamic University, Makkah 1/2005 – 1/2011

Publications:

Journal Articles

1. K. Fu, A. Alhamadani, T. Ji, C.T. Lu, "Batman or the Joker? The Powerful Urban Computing and its Ethics Issues," Newsletter SIGSPATIAL Special, Vol. 11. No. 2, pp. 16-25, December 2019.

Conference Proceedings

1. He, Jianfeng, Xuchao Zhang, Shuo Lei, **Abdulaziz Alhamadani**, Fanglan Chen, Bei Xiao, and Chang-Tien Lu. "CLUR: Uncertainty Estimation for Few-Shot Text Classification with Contrastive Learning." In *Proceedings of the 29th ACM SIGKDD Conference on Knowledge Discovery and Data Mining*, pp. 698-710. 2023.. (Accepted, Acceptance rate: 22%)

2. He, Jianfeng, Syuan-Ying Wu, **Abdulaziz Alhamadani**, Chih-Fang Chen, Wen-Fang Lu, Chang-Tien Lu, David Solnick, and Yanlin Li. "MetroScope: An Advanced System for Real-Time Detection and Analysis of Metro-Related Threats and Events via Twitter." In *Proceedings of the 46th International ACM SIGIR Conference on Research and Development in Information Retrieval*, pp. 3130-3134. 2023.

3. **Abdulaziz Alhamadani**, Shailik Sarkar, Lulwah Alkulaib, and C.T. Lu, "DOD-Explainer: Explainable Drug Overdose Deaths Predictor from Crime and Socioeconomic Data," *Proceedings of the 2022 IEEE International Conference on Big Data (IEEE BigData)-Special Session on HealthCare Data*, pp. 5153-5162, 2022.

4. Sarkar, Shailik, **Abdulaziz Alhamadani**, and Chang-Tien Lu. "Explainable Prediction of the Severity of COVID-19 Outbreak for US Counties." In *2022 IEEE International Conference on Big Data (Big Data)*, pp. 5338-5345. IEEE, 2022.

5. Alkulaib, Lulwah, **Abdulaziz Alhamadani**, Shailik Sarkar, and Chang-Tien Lu. "HyperTwitter: A Hypergraph-based Approach to Identify Influential Twitter Users and Tweets." In *2022 IEEE International Conference on Big Data (Big Data)*, pp. 693-700. IEEE, 2022. (Acceptance rate: 18.6%) (Slides)

6. Shailik Sarkar, **Abdulaziz Alhamadani**, Lulwah Alkulaib and Chang-Tien Lu, "Predicting Depression and Anxiety on Reddit: A Multi-task Learning Approach," *Proceedings of the 2022 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM)*, 2022. <mark>Best Paper Award</mark>

7. **Abdulaziz Alhamadani**, Shailik Sarkar, Lulwah Alkulaib and Chang-Tien Lu, "PRISTINE: Semi-supervised Deep Learning Opioid Crisis Detection on Reddit," *Proceedings of the 2022 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM)*, 2022.

8. **Alhamadani, Abdulaziz**, Xuchao Zhang, Jianfeng He, and Chang-Tien Lu. "LANS: Large-scale Arabic News Summarization Corpus." *arXiv preprint arXiv:2210.13600* (2022).

9. **Alhamadani, Abdulaziz**, Shailik Sarkar, Lei Zhang, Lulwah Alkulaib, and Chang-Tien Lu. "Forecasting high-risk areas of covid-19 infection through socioeconomic and static spatial analysis." In *2021 IEEE International Conference on Big Data (Big Data)*, pp. 4313-4322. IEEE, 2021. (Acceptance rate: 19%)

10. Manuel, Mark, Poorvesh Dongre, **Abdulaziz Alhamadani**, and Denis Gračanin. "Supporting embodied and remote collaboration in shared virtual environments." In *International Conference on Human-Computer Interaction*, pp. 639-652. Cham: Springer International Publishing, 2021.

11. He, Jianfeng, Xuchao Zhang, Shuo Lei, Zhiqian Chen, Fanglan Chen, **Abdulaziz Alhamadani,** Bei Xiao, and ChangTien Lu. "Towards more accurate uncertainty estimation in text classification." In *Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, pp. 8362-8372. 2020. (Acceptance rate: 24.6%)

12. Alkulaib, Lulwah*, **Abdulaziz Alhamadani***, Taoran Ji, and Chang-Tien Lu. "Collect Ethically: Reduce Bias in Twitter Datasets." In *Information Management and Big Data: 6th International Conference, SIMBig 2019, Lima, Peru, August 21–23, 2019, Proceedings 6*, pp. 106-114. Springer International Publishing, 2020.

Awards and Grants
- King Abdullah Scholarship Program M.S Fellowship 2012
- King Abdullah Scholarship Program Ph.D. Fellowship 2019
- Best Paper Award at the International Conference on Advances in Social Networks Analysis and Mining (ASONAM) 2022
- Graduate Student Service Award for College of Engineering and Computer Science Department 2023

Department Service
- Graduate Student Assembly (GSA): Falls Church Representative 2019
- Graduate Student Assembly (GSA): Vice President 2020
- Graduate Student Assembly (GSA): President (2020-2021)
- Graduate Student Assembly (GSA): Communication Chair (2022)
- Organized Ping Pong Tournament (2020, 2021, 2022, 2023)
- Job Fair volunteer Department of Computer Science, Virginia Tech (2022)

Community Service
- Alexandria Scottish *Christmas Walk Parade* volunteer with Virginia Tech's president (2020)
- Volunteer at EID Festival at the Saudi Arabian Cultural Mission, Fairfax, Virginia 2022
- Volunteer at Saudi National Day Festival at the King Abdullah Academy, Virginia 2022

Sport License:
- U.S. Soccer Coaching 9v9 Grassroot 2022
- U.S. Soccer Coaching 11v11 Grassroot 2022
- U.S. Soccer Coaching international D-License 2022

Professional Service
- **Conference Volunteer:**
  - Volunteer at International Council on Hotel, Restaurant and institutional education (**ICHRIE** 2022).
  - **ACM SIGSPATIAL** Conference Volunteer (2021)

- o **EMNLP** Conference Volunteer (2021)
- o Volunteer at International Council on Hotel, Restaurant and institutional education (**ICHRIE** 2023).

- **Conference Reviewer**
  - o The 29th International Conference on Computational Linguistics (**COLING**), 2022.
  - o Conference on Neural Information Processing Systems (**NeurIPS**) Track Datasets and Benchmarks, 2022
  - o The Conference on Empirical Methods in Natural Language Processing (**EMNLP**), 2022.
  - o Proceedings of the 2023 Conference of the North American Chapter of the Association for Computational Linguistics (**ACL**), 2023.
  - o Conference on Computational Natural Language Learning **CoNLL** 2023
  - o Conference on Neural Information Processing Systems (**NeurIPS**) Track Datasets and Benchmarks, 2023
  - o The Conference on Empirical Methods in Natural Language Processing (**EMNLP**), 2023
  - o The Conference on Empirical Methods in Natural Language Processing IndustrialTrack (**EMNLP Industrial**), 2023.