Farhana Ferdousi Liza, PhD, FHEA

LECTURER · COMPUTING SCIENCES

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[E] Education

PhD in Computer Science *Kent, UK*
[E1] UNIVERSITY OF KENT *July 2020*
- Thesis Title: Improving Training of Deep Neural Network Sequence Models.
  Supervisor: Dr Marek Grzes and Professor Alex Freitas

MSc in Data Communications System (Distinction) *London, UK*
[E2] BRUNEL UNIVERSITY LONDON *July 2008*
- Dissertation Title: Investigation on Proxy Mobile IPv6.
  Supervisor: Dr Wenbing Yao

BSc in Computer Science and Engineering (CGPA 3.84/ 4.00 - with Honour) *Sylhet, Bangladesh*
[E3] SHAH JALAL UNIVERSITY OF SCIENCE AND TECHNOLOGY *March 2007*
- Dissertation Title: Intrusion Detection in Neural Network.
  Supervisor: Dr Chandan Kumar Karmakar

[PE] Professional Experience

2021-Present	**[PE1] Lecturer in Computing Sciences**, University of East Anglia (UEA), UK.
2019-2021	**[PE2] Postdoc Researcher**, ESRC Business and Local Government Data Research Centre, University of Essex, UK.
2018	**[PE3] Turing Intern (June 2018 - September 2018)**, The Alan Turing Institute, UK.
2016-2019	**[PE4] Assistant Lecturer**, University of Kent, UK.
2014-2015	**[PE5] Graduate Teaching Assistant**, Oregon State University, USA.
2012-2014	**[PE6] Assistant Professor, Dept. of Computer Science**, American International University-Bangladesh.
2009-2012	**[PE7] Lecturer, Dept. of Computer Science**, American International University-Bangladesh.

[RI] Research Impact (Google Scholar h-index: 10), Funding (Awarded Approximately £166,860, including PhD funding), and Research Interests include

Deep Learning, General Machine Learning (ML), Artificial Intelligence (AI) Security, Trustworthy AI, Evaluation strategies for AI systems, Digital Tool Development, Natural Language Processing, Computational Social Science, Computational Intelligence for Healthcare.

[G] Grants

2022	**(G1) Wellcome Mental Health Data Prize (Co-I) (UEA received: £3,038)**, Wellcome Trust	*£40,000*

[I] Impact Grants

2022	**(I1) Digital technologies to transform care delivery and Children and young people's mental health (Co-PI)**, UEA Health and Social Care Partners	*£ 25,000*

[AH] Award and Honours

2018	**(AH1) PhD Continuation Funding** , School of Computing, University of Kent, UK	*£ 7,380*
2018	**(AH2) Sciences Postgraduate Research Prize** , Graduate School, University of Kent, UK	*£ 500*
2016	**(AH3) Award for securing top 5 position**, Sequence Prediction Challenge Competition	*€ 360*
2015	**(AH4) JILP Endowment Scholarship**, School of Computing, University of Kent, UK	*£ 54,534*
2014	**(AH5) Graduate Teaching Assistance**, Oregon State University, USA	*$ 40,400*
2014	**(AH6) Rickert Scholarship**, Oregon State University, USA	*$ 6,000*

[TG] Travel Grants

2022	**(TG1) Travel grant for attending a workshop, WTF 2022: Working with Trouble and Failures in conversation between humans and robots**, University of Hertfordshire, UK	*£ 380*
2019	**(TG2) DELFOL Travel Grant for a conference presentation**, NAVER LABS Europe	*€ 250*
2018	**(TG3) Travel Grant for the Alan Turing Institute (ATI) paid internship**, School of Computing, University of Kent, UK	*£ 956*

[PP] Policy Paper

[PP1] **F. F. Liza**. *Regulation for Systemic Artificial Intelligence Safety: Interoperable Regulations and a Pragmatic Enforcement Strategy for Mitigating Unintended Consequences*. The Regulation of Artificial Intelligence: Shaping Governance and Power Relations for a Liberal Future. Accepted for publication, 2024. (**Commissioned by University of Ljubljana, ELF, FNF and Zavod 14 to prepare the policy paper on EU AI Act, based on the paper P6**)

[P] Peer-reviewed Publications

[P1] K. Balloo, P. Delaney, A. Hosein, F. F. Liza. Trends and global power of research on physical activity, depression, and anxiety in adolescents and young adults: science mapping the literature. International Journal of Adolescence and Youth, 29(1), 2024, DOI:10.1080/02673843.2024.2375356. (**Wellcome Trust Grant - Ref# 226695/Z/22/Z- Output**)

[P2] P. Nemani , Y.d. Joel, P. Vijay, **F. F. Liza**. *Gender bias in transformers: A comprehensive review of detection and mitigation strategies*. Natural Language Processing Journal, Volume 6, March 2024, DOI: 10.1016/j.nlp.2023.100047. (**Mentoring Junior Researchers**)

[P3] F. A. Tan, A. Hürriyetoğlu, T. Caselli, N. Oostdijk, T. Nomoto, O. Uca, H. Hettiarachchi, **F. F. Liza**, S. Ng. *RECESS: Resource for Extracting Cause, Effect, and Signal Spans*. In Proc. of the 13th International Joint Conference on Natural Language Processing and the 3rd Conference of the Asia-Pacific Chapter of the Association for Computational Linguistics (IJCNLP-AACL), pp. 66–82, 2023, DOI: 10.18653/v1/2023.ijcnlp-main.6. (**Resource Paper, Cross-disciplinary Research**)

[P4] F. Förster, M. Romeo, P. Holthaus, L. J. Wood, C. Dondrup, J. E. Fischer, **F. F. Liza**, S. Kaszuba, J. Hough, B. Nesset, D. H. García, D. Kontogiorgios, J. Williams, E. E. Özkan, P. Barnard, G. Berumen, D. Price, S. Cobb, M. Witschko, L. Tisserand, M. Porcheron, M. Giuliani, G. Skantze, P. Healey, I. Papaioannou, D. Gkatzia, S. Albert and G. Huang. *Working with Troubles and Failures in Conversation between Humans and Robots: Workshop Report*. Frontiers in Robotics and AI, section Human-Robot Interaction, Volumn 10, 2023, DOI: 10.3389/frobt.2023.1202306. (**Scholarly Contributions Linked to EPSRC Robotics & Autonomous Systems Network (UK-RAS)**)

[P5] F. A. Tan, H. Hettiarachchi, A. Hürriyetoğlu, N. Oostdijk, O. Uca, S. Thapa, **F.F. Liza**. *Event causality identification-shared task 3, case 2023*. In Proc. of the 6th Workshop on Challenges and Applications of Automated Extraction of Socio-political Events from Text, pp. 144-150, 2023, ISBN: 978-954-452-089-2. (**Cross-disciplinary Research**)

[P6] **F. F. Liza**. *Challenges of Enforcing Regulations in Artificial Intelligence Act — Analyzing Quantity Requirement in Data and Data Governance*. In Proc. of the 1st International Workshop on Imagining the AI Landscape After the AI Act, in conjunction with the first International Conference on Hybrid Human-Artificial Intelligence, 10 pages, 2022, URN: urn:nbn:de:0074-3221-3. (**The paper provides the first technical analysis on EU AI Act enforcement challenges and ongoing policy engagement with the UK Govt. Office for AI.**)

[P7] F. A. Tan, H. Hettiarachchi, A. Hürriyetoğlu, T. Caselli, O. Uca, **F. F. Liza**, N. Oostdijk. *Event Causality Identification with Causal News Corpus - Shared Task 3*. In Proc. of the 5th Workshop on Challenges and Applications of Automated

Extraction of Socio-political Events from Text (CASE 2022), in conjunction with the conference on Empirical Methods in Natural Language Processing, pp. 95–208, 2022, DOI: 10.18653/v1/2022.case-1.28. (**Cross-disciplinary Research**)

[P8] A. Bucur, H. Jang, **F. F. Liza**. *Capturing Changes in Mood Over Time in Longitudinal Data Using Ensemble Methodologies*. In Proc. of the 2022 The Eighth Workshop on Computational Linguistics and Clinical Psychology: Mental Health in the Face of Change, in conjunction with the conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies, Association for Computational Linguistics, pp. 205–212, 2022, DOI: 10.18653/v1/2022.clpsych-1.18. (**Mentoring Junior Researchers**)

[P9] F. A. Tan, A. Hürriyetoğlu, T. Caselli, N. Oostdijk, T. Nomoto, H. Hettiarachchi, I. Ameer, O. Uca, **F. F. Liza**, T. Hu. *The Causal News Corpus: Annotating causal relations in event sentences from news*. In Proc. of the 13th Conference on Language Resources and Evaluation (LREC 2022). European Language Resources Association (ELRA), pp. 2298–2310, 2022, ISBN: 979-10-95546-72-6. (**Resource Paper, Cross-disciplinary Research**)

[P10] A. Hürriyetoğlu, O. Mutlu, E. Yörük, **F. F. Liza**, R. Kumar, S. Ratan. *Multilingual Protest News Detection - Shared Task 1, CASE 2021*. In Proc. of the Workshop on Challenges and Applications of Automated Extraction of Sociopolitical Events from Text (CASE 2021), Association for Computational Linguistics (ACL), pp. 79-91, 2021, ISBN 978-1-954085-79-4. (**Cross-disciplinary Research**)

[P11] A. Quiroz Flores, **F. Liza**, H. Quteineh, B. Czarnecka. *Variation in the timing of Covid-19 communication across universities in the UK*. PLoS ONE 16(2): e0246391, 25 pages, 2021, DOI: 10.1371/journal.pone.0246391 (**Journal impact factor 3.752, Cross-disciplinary Research, ESRC Grant (Ref# ES/S007156/1) Output**)

[P12] A. Robertson, **F. F. Liza**, D. Nguyen, B. McGillivray and S. Hale. *Semantic Journeys: Quantifying Change in Emoji Meaning from 2012-2018*. In Proc. of the Emoji2021 - 4th International Workshop on Emoji Understanding and Applications in Social Media held as part of The 15th International AAAI Conference on Web and Social Media (ICWSM), 10 pages, 2021, DOI: 10.36190/2021.07. (The work is featured in The Alan Turing Institute webpage[1], the New Scientist Magazine[2] and the BBC newsround[3]). (**Case Study Output of ESRC Grant (Ref# ES/S007156/1), Cross-disciplinary Research and Media Engagement**)

[P13] **F. F. Liza**. *Sentence Classification with Imbalanced Data for Health Applications*. In Proc. of the Fifth Social Media Mining for Health Applications Workshop & Shared Task held as part of Association for Computational Linguistics (ACL) International Conference, pp. 138-145, 2020, ISBN 978-1-952148-41-5. (**ESRC Grant (Ref# ES/S007156/1) Output**)

[P14] P. Shoemark*[4], **F. F. Liza***, D. Nguyen, S. Hale and B. McGillivray. *Room to Glo: A Systematic Comparison of Semantic Change Detection Approaches with Word Embeddings*. In Proc. of Conference on Empirical Methods in Natural Language Processing (EMNLP), pp. 66-76, 2019, ISBN 978-1-950737-90-1. (**Acceptance Rate: 23.8%, Cross-disciplinary Research (ATI internship project), as of May 2024, the citation count stands at 106**)

[P15] **F. F. Liza** and M. Grzes. *Relating RNN Layers with the Spectral WFA Ranks in Sequence Modelling*. In Proc. of the Workshop on Deep Learning and Formal Languages: Building Bridges, held as part of Association for Computational Linguistics (ACL) international conference, pp. 24-33, 2019, ISBN 978-1-950737-39-0. (**Scholarly Contributions Linked to JILP Endowment Scholarship and Selected for Spotlight Presentation**)

[P16] **F. F. Liza** and M. Grzes. *Improving language modelling with noise-contrastive estimation*. In Proc. of Association for the Advancement of Artificial Intelligence (AAAI) conference, pp. 5277-5284, 2018, ISBN 978-1-57735-800-8. (**Acceptance Rate: 24% and Accepted in REF 2021 as a Research Output, Submitted by the University of Kent**)

[P17] **F. F. Liza** and M. Grzes. *A spectral method that worked well in the spice16 competition*. In Proc. of The 13th International Conference on Grammatical Inference, Journal of Machine Learning Research, JMLR: Workshop and Conference Proceedings, volume 57, pp. 143-148, 2017, ISSN 1938-7228. (**Scholarly Contributions Linked to JILP Endowment Scholarship and Recipient of Free Registration Award**)

[P18] **F. F. Liza** and M. Grzes. *Estimating the accuracy of spectral learning for hmms*. In Proc. of International Conference on Artificial Intelligence: Methodology, Systems, and Applications, LNCS, volume 9883, Springer, pp. 46-56, 2016, ISBN 978-3-319-44747-6. (**Scholarly Contributions Linked to JILP Endowment Scholarship**)

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[1] https://www.turing.ac.uk/blog/emoji-are-even-more-language-previously-thought
[2] https://www.newscientist.com/article/2277527-the-way-we-use-emojis-evolves-like-language-and-changes-their-meaning/
[3] https://www.bbc.co.uk/newsround/57114976
[4] *equal contribution

[P19] **F. F. Liza** and M. Grzes. *An improved crowdsourcing based evaluation technique for word embedding methods*. In Proc. of the 1st Workshop on Evaluating Vector-Space Representations for NLP, held as part of Association for Computational Linguistics (ACL) international conference, pp. 55-61, 2016, ISBN 978-1-945626-14-2. (**Scholarly Contributions Linked to JILP Endowment Scholarship**)

[P20] **F. F. Liza** and W. Yao. *Implementation architecture of proxy mobile ipv6 protocol for ns2 simulator software*. In Proc. of International Conference on Communication Software and Networks, IEEE, pp. 287-291, 2009, ISBN:978-0-7695-3522-7. (**Scholarly Contributions Linked to MSc Dissertation Project**)

[P21] R. A. Dilruba, N. Chowdhury, **F. F. Liza**, and C. K. Karmakar. *Data pattern recognition using neural network with backpropagation training*. In Proc. of International Conference on Electrical and Computer Engineering, IEEE, pp. 451-455, 2006, ISBN 98432-3814-1. (**Scholarly Contributions Linked to BSc Final Year Project**)

[RC] Selected Research Presentations

[RC1] 2024. *Generative AI in Education*. **Invited Speaker** at a online conference on "Impact of Artificial Intelligence on Education", France.

[RC2] 2023. *Promoting Originality and Innovative Research Idea Development among MSc Taught Students through ChatGPT-Assisted Learning*. **Conference Presenter**, Academic Practice and Technology Conference, King's College London, UK.

[RC3] 2023. *Trustworthy Artificial Intelligence for Social Good*. **Invited Speaker**, ESRC BLG Workshop on Artificial Intelligence and Data Science for Society and the Public Good: Technologies, Applications, and Governance.

[RC4] 2023. *Wellcome Trust Mental Health Data Prize*. **Research Group Presenter**, Samaritans.

[RC5] 2022. *Challenges of Enforcing Regulations in the Artificial Intelligence Act—Analyzing Quantity Requirements in Data and Data Governance*. **Conference Presenter**, 1st International Workshop on Imagining the AI Landscape After the AI Act (in conjunction with the first International Conference on Hybrid Human-Artificial Intelligence), Vrije Universiteit Amsterdam, Netherlands.

[RC6] 2022. *Meta-Evaluation of Evaluation in Text Summarization*. **Research Group Presenter**, NLP SIG at The Alan Turing Institute, London, UK.

[RC7] 2021. *Social Media-Based Early Warning Systems for the National Health Service (NHS)*. **Invited Speaker**, Webinar arranged by 'Health Tech Newspaper (HTN)', UK.

[RC8] 2020. *Changes in Online Shopping Behaviour Due to COVID-19 and Its Impact on Data-Driven AI-Based Systems*. **Invited Speaker**, Webinar arranged by 'Always Possible - Digital Research and Innovation Value Accelerator (DRIVA Arts DRIVA)'.

[RC9] 2019-2021. *Data and Method (Artificial Intelligence and Machine Learning) Consultancy for Public Sector, Charities, and Businesses*, **Expert Consultant**, Funded by ESRC project (Ref#ES/S007156/), a data consultation program on improving the Data Management and Analysis Pipeline for the UK Public Sector and Businesses.

[RC10] 2018. *Automatic Detection of New Word Meanings from Social Media*. **Invited Speaker**, NLP SIG at The Alan Turing Institute, London, UK.

[M] Mentoring

2022-	**[M1] Mentoring Junior Researchers - The co-author of the publications [P1,P7]**, topics: Gender Bias Detection and Mitigation, Longitudinal Data Modeling and Evaluation	*International Collaboration*

[S] Supervision

2024-	**[S1] Co-Supervision of two PhD Students**, topics: Measuring Employee Wellness using Ubiquitous Devices, Agenda Building Capacity of European Union	*UEA*
2021-2024	**[S2] Supervision of 15 PGT Dissertation Projects**, topics: AI evaluation: Meta-evaluation of Evaluation of Neural Network-based Text summarisation, AI deployment: Fake News Detection Platform using Machine learning and Deep Learning models, AI methodologies: Deep Leaning Based Fake News Detection: Cross-domain Analysis, AI and explanation: Fake News Classification on Social Media dataset with SHAP explanation, AI and author attribution: An Investigation into the use of Machine Learning Techniques for the Detection of Fake News.	*UEA*
2022-2024	**[S3] Supervision of 11 Third-Year Projects**, topics: AI Cyber Security: Implementing a Traffic Light System for Fake News Detection, Transforming Unstructured Data into a Relational Model: Building a Text-Based Emotion Detection System, Creating a Text-Based Emotion Detection System: Investigating the Usability Impact of Color in App User Experience, Deep Learning Approaches for Fake News Detection.	*UEA*

[PR] Invited Peer-Review

UKRI EPSRC grants, 1st Conference on Language Modeling (COLM), PLoS One, AAAI, NeurIPS, ACL, EMNLP, ICLR, ClimateNLP 2024

[ES] External Research Services & Leadership

Sep 2023	**[ES1] The 6th Workshop on Challenges and Applications of Automated Extraction of Socio-political Events from Text, The 2023 Conference on Recent Advances in Natural Language Processing**, Member of Organising Committee	*Verna, Bulgaria*
Dec 2022	**[ES2] Fifth Workshop on Challenges and Applications of Automated Extraction of Socio-political Events from Text, The 2022 Conference on Empirical Methods in Natural Language Processing**, Member of Organising Committee	*Abu Dhabi*
Aug 2022	**[ES3] Health Tech Awards at Health Tech Newspaper**, Judge	*UK*

[NS] Research Networks and Learned Society

2024-2025	**[NS1] ACM Professional Membership**, Association for Computing Machinery
2024-2025	**[NS2] SRHE membership**, The Society for Research into Higher Education
2022-2023	**[NS3] ACL Membership**, The Association for Computational Linguistics

[D] Professional Development

2023-2024	**[D1] Enrolled in the Diploma in HEP**, University of East Anglia, UK.
2021-2023	**[D2] Completion of PgCert HEP course**, University of East Anglia, UK.

[T] Module Leadership at UEA

2023-24	**[T1] Information Retrieval**, Module Organiser and Lecturer (50%) (Approximately 80 Students)
2022-24	**[T2] Database Manipulation (MSc)**, Module Organiser and Lecturer (50%) (Approximately 80 Students)
2022-24	**[T3] Database Systems (BSc)**, Module Organiser and Lecturer (70%) (Approximately 230 Students)

[CD] Curriculum Design

2021	**Introduction to Data Science**, CPD for ESNEFT (NHS Trust), ESRC Grant Delivery, University of Essex (UoE)	*UoE*
2020	**Introduction to SQL**, CPD for Essex Police, ESRC Grant Delivery, University of Essex (UoE)	*UoE*

[ST&L] Scholarship of Teaching and Learning

[EP] **MAHEP Education Projects**

2023-25	**[EP1] Generative AI (e.g., ChatGPT) in Higher Education**, Diploma in HEP	*UEA*

[SC] **Scholarship**

[SC1] **F. F. Liza**. *Responsible uses of Artificial Intelligence (AI) (e.g., ChatGPT) in Higher Education* . UEA CHERPPS Learning and Teaching Day, June 2024. (**Research Presenter - Generative AI in HE**)

[W] Pastoral Care, Academic Development and Workplace Wellbeing

2023-Present	**[W1] Participant in all Faculty DLO working groups**, University of East Anglia, UK.
2024-Present	**[W2] Member at INEE**, A global inter-agency network for Education in Emergencies.
2022-Present	**[W3] Academic Advisor (Approximately 30 Students per Academic Year)**, University of East Anglia, UK.
2022-Present	**[W4] Community Member of the Inclusivity Network (IN)**, University of East Anglia, UK.

[A] Administration & Citizenship

2024-Present	**[A1] Member of Advance HE Connect**, The online network dedicated to HE connecting the global higher education community with over 25,000 users worldwide.
2022-Present	**[A2] Disability Liaison Officer**, Computing Sciences, University of East Anglia, UK.
2021-Present	**[A3] Extenuating Circumstances Panel Member**, Computing Sciences, University of East Anglia, UK.
2021-2023	**[A4] ED&I Committee Member**, Computing Sciences, University of East Anglia, UK.