

AIDA TARIGHAT

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Research Background & Interests

Final-year doctoral candidate in the UKRI CDT in NLP at the University of Edinburgh, working at the intersection of **computational psycholinguistics, cognitive science, and NLP**. My research combines **behavioral experiments, corpus analysis, and computational modeling** to investigate:

- **Written disfluencies and nonliteral meaning** – e.g., *um*, *hmm*, sarcasm, pragmatic variability, communicative difficulty
- **Predictive processing and neural correlates of comprehension** – how humans and language models anticipate and interpret cues
- **Human-like, context-aware dialogue systems** – improving interpretability, trust, and interaction quality

Methods & Tools: Eye-tracking, self-paced reading, survey design, statistical modeling (R), NLP pipelines (Python), LLM evaluation; currently extending work to small language models and multimodal integration.

Applications: Conversational AI, virtual assistants, e-mental health tools, education technologies.

EDUCATION

Ph.D. Informatics: Natural Language Processing *University of Edinburgh, U.K.* – 09/2021-2025
expected

- Thesis: *Written Disfluencies and Nonliteral Meaning in Natural Language Processing: Evidence from Behavioral and Computational Data*
- Supervisors: Martin Corley, Patrick Sturt
- Expected submission: September 2025; anticipated defense: November/December 2025

M.Sc. General Psychology *University of Tabriz, Iran* – 09/2018-09/2021

- Thesis: *Comparing the Aspects of Emotional Regulation in Individuals with and without Sexual Traumatic Experiences*
- Supervisors: Mostafa Zarean, Darejan Javakhishvili

M.A. English Language and Literature *Shahid Chamran University, Iran* – 09/2010-08/2013

- Thesis: *A Social Psychological Analysis of Power Distribution in José Saramago's Blindness (Based on the 1997 English Translation by Giovanni Pontiero)*
- Supervisors: Mahmoud Daram, Saleh Hosseini

B.A. English Language and Literature *Shahid Chamran University, Iran* – 09/2006-08/2010

PUBLICATIONS

(In preparation)

Tarighat, A., Sturt, P., Corley, M. It's Umm Hard to Process but Not Hard to Evaluate: Written Disfluency Affects Humans and Language Models Differently. *Cognitive Science*.

Tarighat, A., Zarean, M., & Javakhishvili, J. Difficulties in Emotion Regulation Strategies: The Role of Sexual Traumatic Experiences. *European Journal of Psychotraumatology*.

Tarighat, A., & Zarean, M. Contemporary directions in emotion management: a conceptual review. *Motivation and Emotion*.

(Published)

Tarighat, A., Sturt, P., Corley, M. (2024). Perspectives on Language Model and Human Handling of Written Disfluency and Nonliteral Meaning. *Proceedings of the 28th Workshop on the Semantics and Pragmatics of Dialogue (Trentologue)*.

Kapron-King, A., Fletcher, L. Tarighat, A., Droop, S., Dobрева, R., Cummins, C., & Rohde, H. (2024) Tell it like it (usually) is(n't): Speakers' mention of instruments in Reddit corpus reflects instrument (a)typicality. *Conference on Rational Approaches in Language Science (RAILS)*.

Hew, J., Tarighat, A., Corley, M., Horne, Z. (2024). Examining structural and semantic predictors of announced sarcasm on r/AskReddit. *Proceedings of the Annual Meeting of the Cognitive Science Society*.

Tarighat, A., Corley, M. (2023) When Speech Becomes Writing: The Case of Disfluencies. *CLASP Conference on Learning with Small Data*.

Tarighat, F. S., Magdy, W., & Corley, M. (2022). Understanding Fillers May Facilitate Automatic Sarcasm Comprehension: A Structural Analysis of Twitter Data and a Participant Study. *Proceedings of the 26th Workshop on the Semantics and Pragmatics of Dialogue (DubDial)*.

Zarean, M., & Tarighat, F. S. (2022). Hearing the untold: a review of Central Asia's contribution to the expansion of psychological assessment. *Comparative Histories of Psychological Assessment*. Cambridge University Press.

Tarighat, F. S., Zarean, M., & Javakhishvili, J. (2021). Cognitive Emotion Regulation in Individuals With and Without Sexual Traumatic Experiences. *National Congress of Family Psychology Association of Iran: The Family in Our Age*. University of Ahvaz. (Persian)

Zarean, M., Tarighat, F. S., & Clough, E. A. (2019). Preferences and attitudes toward e-mental health services among Iranians. *The 1st Biennial Congress on Psychology and Behavioral Sciences*. University of Tabriz. (Persian)

Tarighat, F. S. (2019). A social psychological study of power relations considering neutral agents and gendered bodies in José Saramago's *Blindness*. *The 1st Biennial Congress on Psychology and Behavioral Sciences*. University of Tabriz.

PROFESSIONAL EXPERIENCES (RESEARCH, SUPERVISION, TEACHING, TRANSLATION, AND MANAGEMENT)

- Ph.D. Graduate Assistant, psycholinguistics project supervision of undergraduate students, Department of Psychology, University of Edinburgh (2023-Present)
- Industry Collaborator, Mentor 360 (UK-based Health and Wellbeing Startup) 2025
 - Designed a human-in-the-loop system integrating a small language model (SLM) with dynamic evaluation strategies for detecting hesitation and sarcasm in text-only user inputs.

- Proposed perception-based NLP modeling inspired by psychological alignment and pragmatic interpretability. (Project approved but currently on hold awaiting ATAS certification)
- M.Sc. Graduate Assistant, standardized psychology questionnaire translation and tailoring for graduate research projects, Department of Psychology, University of Tabriz (2018-2021)
- Freelance English Language Instructor, In-Person/Online Courses (2006-Present)
- Senior Language Instructor (2006-2018)
 - General English for Adults, AvaTalk Language School, Urmia, Iran
 - English Council of the Shahid Chamran University of Ahvaz, General English Communication Course for University Students
 - Upper-Intermediate/Advanced General English and Advanced English Communication, Safir-e Danesh Language Institute, Ahvaz, Iran
 - Intermediate IELTS Preparation Course, Ariana IELTS Center, Ahvaz, Iran
 - University Entrance Exam, Ahvaz, Iran
- Freelance Scientific and Literary Translator and Editor (2008-present)
- International Affairs Manager, Mashal Tarigh Tejarat Aria Trading Company, Urmia, Iran (2009-2010)

WORKSHOPS AND CONFERENCES (SPEAKER, PRESENTER, TRAINEE, ATTENDEE)

- UKRI AI CDTs in NLP Joint Partners' Summit, Edinburgh (2025) - Poster presenter
- The 28th Workshop on the Semantics and Pragmatics of Dialogue, SemDial (TrentoLogue), Rovereto, Italy (2024) - Speaker
- The CLASP Conference on Learning with Small Data (LSD), Gothenburg, Sweden (2023) - Poster presenter
- The 26th Workshop on the Semantics and Pragmatics of Dialogue, SemDial (DubDial), Dublin, Ireland (2022) - Poster presenter
- Machine Learning in Cognitive Sciences, University of Tabriz, Tabriz, Iran (2021) - Trainee
- Cognitive Rehabilitation: Attention, Memory, and Executive Functions, Shenakht Center, Tehran, Iran (2020) - Trainee
- National Congress of Family Psychology Association of Iran: The Family in Our Age, Ahvaz, Iran (2021) - Speaker
- The 1st Biennial Congress on Psychology and Behavioral Sciences, University of Tabriz, Tabriz, Iran (2019) - Attendee
- Introduction to EEG Biofeedback (Neurofeedback), Approved by the Biofeedback Federation of Europe (BFE), Urmia, Iran (2019) - Trainee
- Premarital Counseling, Iranian Clinical Psychology Association, Tabriz, Iran (2018) - Trainee
- Transdiagnostic Treatments for Anxiety Disorders, Clinical Psychology Association, Urmia, Iran (2018) - Trainee
- The 2nd National Conference on Literary Criticism, Tarbiat Modares University, Tehran, Iran (2011) - Attendee

AWARDS AND SCHOLARSHIPS

- UKRI Centre for Doctoral Training in Natural Language Processing Scholarship, University of Edinburgh, U.K., 2021-2025
- Exceptional Talents Award for Higher Education Programs Enrollment, Shahid Chamran University, Iran, 2010

TRAINING, SKILLS, AND INTERESTS

- **Ongoing Training:** User Experience (UX) Design; LLM-based Application Development
- **Selected Courses (Ph.D.):** Univariate & Multivariate Statistical Modeling in R; Computer Programming for Speech and Language Processing; Pragmatics; Doing Research in NLP; Accelerated NLP; Case Studies in AI Ethics; Text Technologies for Data Science; Machine Learning Practical
- **Computer Programming and Analysis:** Python, R, JavaScript (for experiment design, statistical analysis, and data visualization)
- **Experimentation and Research:** Behavioral experiments (eye-tracking and self-paced reading, ExperimentBuilder, DataViewer, E-Prime, OpenSesame) and survey design (Qualtrics)
- **Languages:** English (Fluent), Persian (Native), Azerbaijani (Native), Turkish (Upper-Intermediate), French (A1), German (A1), Suret (Elementary)
- **Trauma Care Psychology:** Corrective exercises for posttraumatic stress care
- **Professional Hobbies:** Photography, Interior architecture and design, Ceramic dinnerware and practical artifacts design

INVITED TALKS

- CDTalks, Student-led Seminars by CDT in NLP, *Language Model and Human Handling of Written Disfluency and Nonliteral Meaning*, Edinburgh, 2024
- Brain, Cognition, and Development Seminar *Exploring Structural and Semantic Predictors of Written Sarcasm in Online Settings*, Edinburgh, 2024
- CDTalks, Student-led Seminars by CDT in NLP, *Differences in Human and Machine Interpretation of Nonliteral Meanings*, Edinburgh, 2023
- Psycholinguistics Coffee, Seminars at the School of PPLS, *When Speech Becomes Writing: The Case of Disfluencies*, Edinburgh, 2023
- Alan Turing Institute, Student Networking and Presentation Session, *Tracing Sarcastic Meanings of Fillers on Twitter: A Structural Analysis of Data and a Pilot Study*, London, 2022

VOLUNTEERING AND COMMUNITY SERVICE

- Recruiting Underrepresented Gifted Students for Educational Funds, SEKHAVAT Coordination Center for the Benefactors of Urmia, Urmia, Iran (2018-2021)
- Cancerous Patients' Emotional Support, Omid Hospital, Urmia, Iran (2013-2015)

- Language Instructor, General English Program for Cancerous Students, Shafa Hospital, Ahvaz, Iran (2007)
- Student Assistant, Psychology Support Team for Runaway Girls with a Focus on Sexual Abuse and Assault Victims (2006-2007)

COMMUNITY ENGAGEMENT

- **Co-organizer**, Interdisciplinary Writing Retreat for Doctoral Researchers, University of Edinburgh, 2024
Designed and co-led a 4-day academic writing retreat to Northumberland for supporting CDT in NLP cohorts.
- **Co-organizer**, Nature Retreats at Fimbush, 2022–2023
Helped organize 3-day retreats integrating nature, informal dialogue, scientific problem-solving, and reflective practice for CDT in NLP researchers.
- **Organizer**, Informatics Postgraduate Walk + Picnic, University of Edinburgh, 2023
Facilitated a casual community-building event fostering peer support and wellbeing among early-career Informatics researchers.
- **Volunteer**, Architecture and Mechanisms for Language Processing (AMLaP), 2024
Supported conference logistics, participant coordination, and venue setup as part of the organizing team.

RESEARCH TRAJECTORY NOTE

- **Gap in Academic Training:** I took a gap in my academic trajectory to care for my mother during an extended period of cancer treatment. This experience deepened my commitment to compassion, presence, and meaningful work. I returned to research with greater focus, resilience, and clarity of purpose.
- **Reason Behind Field Changes:** Each step in my academic path reflects the evolving questions I have pursued; moving from literature and meaning, to psychology and emotional communication, to computational modeling. These were deliberate expansions, chosen to extend my training and better equip me for the complexity of the questions I aim to answer. I believe this multidimensional background makes me a more informed and versatile researcher.

REFERENCES

- **Prof. Martin Corley**, School of PPLS, University of Edinburgh. martin.corley@ed.ac.uk
- **Dr. Patrick Sturt**, School of PPLS, University of Edinburgh. patrick.sturt@ed.ac.uk
- **Prof. Walid Magdy**, School of Informatics, University of Edinburgh. wmagdy@inf.ed.ac.uk
- **Dr. Daniel Mirman**, School of PPLS, University of Edinburgh. daniel.mirman@ed.ac.uk
- **Dr. Mostafa Zarean**, Department of Psychology, University of Tabriz. zarean@tabrizu.ac.ir