Jaydeb Sarker

Assistant Professor in the Department of Computer Science
University of Nebraska Omaha
Room: 277 A, The Peter Kiewit Institute (PKI), 1110 S 67th St, Omaha, NE 68182
Office Phone: 402-554-6139
Email: jsarker@unomaha.edu
Google Scholar
Website: https://jaydebsarker.github.io/

Research Interests

Human Aspects of Software Engineering, Open Source Supply Chain, Security in Code Review, Natural Language Processing, Human-Computer Interaction, Generative AI for Education, Explainability of Deep Learning

Education

Wayne State University — Detroit, MI
Ph.D. in Computer Science, GPA: 3.93/4.0 — *August 2019 – August 2024*
Dissertation Title: Identification and Mitigation of Toxic Communications Among Open Source Software Developers.

Advisor: Dr. Amiangshu Bosu

Wayne State University — Detroit, MI
Masters in Computer Science, GPA: 3.90/4.0 — *August 2019 – August 2022*

Rajshahi University of Engineering and Technology — Rajshahi, Bangladesh
BSc. in Computer Science and Engineering, CGPA: 3.71/4.0 (7^{th}/54) — *January 2012 – October 2016*

Employment

Assistant Professor (Tenure Track) — August 2024 – Present
Department of Computer Science, University of Nebraska at Omaha — *Omaha, NE*

Graduate Teaching Assistant — August 2019 – August 2022, May 2023 - May 2024
Wayne State University — *Detroit, MI*

Summer Camp Instructor — July 2024 – August 2024, June 2022- August 2022
Wayne State University — *Detroit, MI*

Thomas C Rumble Graduate Fellow — August 2022 – May 2023
Wayne State University — *Detroit, MI*

Lecturer — January 2017 – July 2019
University of Information Technology and Sciences — *Dhaka, Bangladesh*

Research Internship — September 2017- November 2017
Otto-Von-Guericke-Universität — *Magdeburg, Germany*

Publications

Journal Papers

J1. **[TOSEM-25]** Sayma Sultana, **Jaydeb Sarker**, Farzana Israt, Rajshakhar Paul, and Amiangshu Bosu. Automated identification of sexual orientation and gender identity discriminatory texts from issue comments. *Accepted in the ACM Transactions on Software Engineering and Methodology*, july 2025 **Impact Factor: 6.6**.

J2. [**TOSEM-23**] **Jaydeb Sarker**, Asif Kamal Turzo, Ming Dong, and Amiangshu Bosu. Automated identification of toxic code reviews using toxicr. *ACM Transactions on Software Engineering and Methodology (TOSEM)*, 32(5), july 2023 **Impact Factor: 6.6**.
Accepted and Presented in the Journal First Track of ESEC/FSE-2023.

Peer Reviewed Conference Papers

C1. [**FSE-25**] **Jaydeb Sarker**, Asif Kamal Turzo, and Amiangshu Bosu. The landscape of toxicity: An empirical investigation of toxicity on github. *Proceedings of the ACM on Software Engineering*, 2(FSE):623–646, 2025. **Direct Accepted, Acceptance Rate Without Major Rev: 11.5% (70/607), Overall (22%)**

C2. [**ESEM-23**] **Jaydeb Sarker**, Sayma Sultana, Steven R Wilson, and Amiangshu Bosu. Toxispanse: An explainable toxicity detection in code review comments. In *2023 ACM/IEEE International Symposium on Empirical Software Engineering and Measurement (ESEM)*, pages 1–12. IEEE, 2023. **Acceptance Rate: 29%.**

C3. [**ESEM-23**] Asif Kamal Turzo, Fahim Faysal, Ovi Poddar, **Jaydeb Sarker**, Anindya Iqbal, and Amiangshu Bosu. Towards automated classification of code review feedback to support analytics. In *2023 ACM/IEEE International Symposium on Empirical Software Engineering and Measurement (ESEM)*, pages 1–12. IEEE, 2023. **Acceptance Rate: 29%.**

C4. [**APSEC-20**] **Jaydeb Sarker**, Asif Kamal Turzo, and Amiangshu Bosu. A benchmark study of the contemporary toxicity detectors on software engineering interactions. In *2020 27th Asia-Pacific Software Engineering Conference (APSEC)*, pages 218–227. IEEE, 2020. **Acceptance Rate: 37%.**

Short Papers

SP1 [**NLBSE-26**] Satyanarayana Chowdary Kadiyala, **Jaydeb Sarker**, and Bianca Trinkenreich. How should self-deprecation comments be classified? a toxicity analysis study on zephyr. In *Accepted Proceedings of the Sixth ACM/IEEE International Workshop on NL-based Software Engineering (Co-Located with ICSE)*, 2026 (Accepted)

SP2 [**FSE-IVR-25**] Mia Mohammad Imran* and **Jaydeb Sarker***. "silent is not actually silent": An investigation of toxicity on bug report discussion. In *The ACM International Conference on the Foundations of Software Engineering (FSE), Ideas, Visions and Reflections Track*, 2025

SP3 [**ASE-22**] **Jaydeb Sarker**. 'who built this crap?' developing a software engineering domain specific toxicity detector. *Student Research Competition on the International Conference on Automated Software Engineering (ASE), Rochester, MI, USA*, pages 1–3, 2022.

SP4 [**ASE-22**] **Jaydeb Sarker**. Identification and mitigation of toxic communications among open source software developers. *Doctoral Symposium on the International Conference on Automated Software Engineering (ASE), Rochester, MI, USA*, pages 1–5, 2022.

SP5 [**ESEM-21**] Sayma Sultana, **Jaydeb Sarker**, and Amiangshu Bosu. A rubric to identify misogynistic and sexist texts from software developer communications. In *Proceedings of the 15th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement (ESEM)*, pages 1–6, 2021.

Honors and Awards

- SIGSOFT CAPS award for attending FSE-2025 (600 USD)
- Outstanding Graduate Teaching Assistant -2024, Computer Science Department at WSU
- NSF Travel Award for attending ESEM-2023
- SIGSOFT CAPS award for attending FSE-2023, ESEM-2023
- NSF Travel Award for attending the Midwest PL Summit 2023
- WSU Graduate Travel Award 2023 (FSE-2023), 2022 (ASE-2022)
- Thomas C. Rumble University Graduate Fellowship for 2022-23 Academic Year (9-month fellowship with full tuition fee waiver), Wayne State University
- Deutscher Akademischer Austauschdienst (DAAD) scholarship, Germany- 2017
- Technical scholarship in RUET for the outstanding results from 2012 to 2016.

Reviewing/Community Services

Grant Reviews

- NSF Graduate Research Fellowship Program- 2025, 2026

Journal Reviewer

1. IEEE Transactions on Software Engineering (TSE): 2024 Present
2. ACM Transactions on Software Engineering and Methodology (TOSEM): 2024- Present
3. Empirical Software Engineering (EMSE): 2025
4. IEEE Transactions on Reliability (T-REL): 2025
5. IEEE Software: 2025
6. Software Quality Journal: 2022-Present
7. e-Informatica Software Engineering Journal: 2024-Present

Conference Program Committee/Reviewer

1. PC Member at 41st IEEE/ACM International Conference on Automated Software Engineering (ASE) - Research Track- 2026 (A* conference)
2. PC Member The ACM International Conference on the Foundations of Software Engineering-Software Engineering Education (FSE-SEET) Track- 2026
3. PC Member at the Mining Software Repositories Conference (MSR) 2026
4. PC Member at LLMTrust 2026 (Co-Located workshop with FSE 2026)
5. International Conference on Software Engineering (ICSE): Artifact Evaluation Track: 2025, 2024

6. Junior PC Member at the Mining Software Repositories Conference (MSR) 2025, 2024, 2023
7. International Conference on Program Comprehension (ICPC): Early Research Achievements (ERA Track) 2025
8. The Evaluation and Assessment in Software Engineering (EASE): Emerging Results Track 2025, Learnings and Reflections Track 2025
9. Software Analysis, Evolution and Reengineering (SANER) : Tool Demo Track 2024
10. MSR 2021: Shadow Program Committee member
11. Additional Reviewers within the ICSE 2021- Tool Demonstrations Track

Student Volunteers

1. 37th IEEE/ACM ASE 2022, In-person Conference at Oakland Center, Michigan.
2. 44th ICSE-2022, In-person Conference at Pittsburgh, PA, USA.
3. 36th IEEE/ACM ASE 2021, Virtual (Original: Melbourne, Australia).
4. 43rd ICSE-2021, Virtual Conference (Original: Madrid, Spain).

Teaching

University at Nebraska at Omaha, USA

- CSCI 4830: Introduction to Software Engineering, Spring 2025, 2026, Fall 2024
- CSCI 4500: Operating Systems, Spring 2026
- CSCI 8920: Empirical Software Engineering, Spring 2025 (Graduate Level)
- CSCI 3320 Data Structures, Fall 2025

Wayne State University, MI, USA

Course/Lab Instructor

- CSC 4110 - Software Engineering Lab: Winter 2021, Summer 2021, Winter 2022, Summer 2022, Fall 2023, Winter 2024
- CSC 4110 - Software Engineering Lecture: Summer 2022
- CSC 4420 - Computer Operating Systems (Theory+Lab) - Summer 2023
- CSC 1100 - Introduction to Problem Solving and Programming Lab: Fall 2019, Winter 2020, Summer 2020, Fall 2020
- CSC 1101- Introduction to Problem Solving and Programming Lecture: Summer 2020

Teaching Assistant

- BE 1500: Introduction to Programming and Computation for Engineers

University of Information Technology and Sciences, Dhaka, Bangladesh

Instructor

- C Programming, Data Structure, Algorithms, Software Engineering (January 2017-July 2019)

Student Advising

Graduate Students, UNO

- Steve Saunders (PhD in CIS): Fall 2025
- Rudra Sarkar (MS in CS): Fall 2025

K-12 Interns at College of IS&T UNO

- Cassandra Lucas: Summer 2025
- Anshul Bihani: Summer 2025

Student Awards

- Rudra received the GRACA award (5,000 USD) from UNO for Summer 2026

Developed Software/Tools for SE Research

ToxiCR | *Python, Tensorflow* [GitHub]
- BERT-base model achieved an 89% F1-score and outperformed other SOTA toxicity detectors

ToxiSpanSE | *Python, Tensorflow, PyTorch* [GitHub]
- RoBERTa model achieved 88% F1 score for toxic class tokens

Research and Technical Skills

Programming: Python, Java, C, C++, SQL, MATLAB, Java Script
Statistical Data Analysis: Empirical Analysis of Software Engineering, Regression Modeling, Bootstrapping in Regression, Qualitative Analysis
NLP and ML: Classification, Deep Neural Models, Transformers, BERT, RoBERTa, XLNet, Token Level Text Classification, Huggingface Transformers, Explainability of Transformers

Outreach Programs and Extra Curricular Activities

- Lead Instructor of Summer Camp program at Wayne State University, 2022 and 2024 (worked with 4-12 grade students)
- Coach of Analytical Programming Contest Team-2018, UITS, Dhaka, Bangladesh

References

Available upon request

January 25, 2026