

Shamse Tasnim Cynthia

Interactive Software Engineering & Analytics Lab
Department of Computer Science
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EDUCATION

University of Saskatchewan, SK, Canada

2023 - present

PhD Student in Computer Science

Grade: 92%

Supervisor: Associate Prof. Dr. Banani Roy

University of Saskatchewan, SK, Canada

2020 - 2022

Master of Science in Computer Science

Grade: 90.5%

Supervisor: Assoc. Prof. Dr. Banani Roy

East West University, Dhaka, Bangladesh

2016 - 2019

Bachelor of Science in Computer Science & Engineering

GPA: 4.00/4.00

Supervisor: Prof. Dr. Shamim H Ripon

WORK EXPERIENCE

Graduate Teaching Assistant

September 2023 - Present

Department of Computer Science, University of Saskatchewan, Canada

Graduate Teaching Assistant

September 2022 - December 2022

Department of Computer Science, University of Saskatchewan, Canada

Lecturer (On Contract)

January 2020 - January 2021

Department of Computer Science and Engineering, BRAC University, Dhaka, Bangladesh

PUBLICATIONS

Journals

1. **Feature transformation for improved software bug detection and commit classification**
Sakib Mostafa, Shamse Tasnim Cynthia, Banani Roy and Debajyoti Mondal.
Journal of Systems and Software, volume 219, page 112205, Elsevier, 2025.
2. **Question Submission Guideline Violations on Developer Q&A Forums: A Multi-Perspective Study**
Shamse Tasnim Cynthia, Saikat Mondal and Banani Roy.
Empirical Software Engineering (Under review), Springer Nature, 2025.

Conference Publications

1. **How Do Community Smells Influence Self-Admitted Technical Debt in Machine Learning Projects?**
Shamse Tasnim Cynthia, Nuri Almarimi and Banani Roy.
Proceedings of the 19th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement (ESEM) (In Publication), 2025
2. **An Empirical Study on the Impact of Gender Diversity on Code Quality in AI Systems.**
Shamse Tasnim Cynthia and Banani Roy.
Proceedings of the 33rd ACM International Conference on the Foundations of Software Engineering (pp. 1540-1549) (FSE Companion), 2025.
3. **Gender Disparities in Contributions, Leadership, and Collaboration: An Exploratory Study on Software Systems Research.**
Shamse Tasnim Cynthia, Saikat Mondal, Joy Krishan Das and Banani Roy.
Proceedings of the 6th Workshop on Gender Equality, Diversity, and Inclusion in Software Engineering (GE@ICSE), 2025.

4. **Identification and Optimization of Redundant Code Using Large Language Models.**
Shamse Tasnim Cynthia.
Proceedings of the 4th International Conference on AI Engineering (CAIN), 2025.
5. **Feature transformation for improved software bug detection models.**
Shamse Tasnim Cynthia, Banani Roy and Debajyoti Mondal.
Proceedings of the 15th Innovations in Software Engineering Conference (ISEC), pages=1-10, 2022.
6. **Data mining approach to analyzing intrusion detection of wireless sensor network.**
Md Alauddin Rezvi, Sidratul Moontaha, Khadija Akter Trisha and Shamse Tasnim Cynthia and Shamim Ripon.
Indonesian Journal of Electrical Engineering and Computer Science, volume=21, number=1, pages=516-523, 2021.
7. **An Efficient Classification of Tuberos Sclerosis Disease Using Nature-Inspired PSO and ACO Based Optimized Neural Network.**
Shamim Ripon, Md Golam Sarowar, Fahima Qasim and Shamse Tasnim Cynthia.
Nature Inspired Computing for Data Science, pages=1-28, 2020.
8. **Automated detection of plant diseases using image processing and faster R-CNN algorithm.**
Shamse Tasnim Cynthia, Kazi Md Shahrukh Hossain, Md Nazmul Hasan, Md Asaduzzaman and Amit Kumar Das.
International Conference on Sustainable Technologies for Industry 4.0 (STI), pages=1-5, 2019.
9. **Predicting and classifying software faults: A data mining approach.**
Shamse Tasnim Cynthia and Shamim H. Ripon.
Proceedings of the 7th International Conference on Computer and Communications Management, pages=143-147, 2019.
10. **Effect of Feature Selection in Software Fault Detection.**
Shamse Tasnim Cynthia, Md Golam Rasul and Shamim Ripon.
Multi-disciplinary Trends in Artificial Intelligence: 13th International Conference, (MIWAI), Kuala Lumpur, Malaysia, volume=11909, pages=52, 2019.
11. **Security concerns of ridesharing services in Bangladesh.**
Shamse Tasnim Cynthia, Moname Majumder, Anika Tabassum, Nazmun Nahar Khanom, Rashedul Amin Tuhin and Amit Kumar Das.
2nd International Conference on Applied Information Technology and Innovation (ICAITI), pages=44-50, 2019.

Preprints

1. **Towards LLM-Powered Task-Aware Retrieval of Scientific Workflows for Galaxy.**
Shamse Tasnim Cynthia and Banani Roy.
arXiv:2511.01757, 2025.

Theses

1. **Analyzing Effect of Feature Selection in Software Fault Detection.**
Shamse Tasnim Cynthia and Md. Golam Rasul.
Undergraduate Thesis, Department of Computer Science and Engineering, East West University, December 2019.
2. **Improving The Usability of Software Systems Using Group Discussions: A Case Study on Galaxy.**
Shamse Tasnim Cynthia
Master's Thesis, Department of Computer Science, University of Saskatchewan, December 2022.

SCHOLARSHIPS

- **75th Anniversary Recruitment Scholarship** issued by the College of Graduate and Postdoctoral Studies of the University of Saskatchewan, contributing \$20,000 towards the funding package for the 2023-2024 year.
- **Academic Excellence Scholarship** awarded by East West University, providing a tuition fee waiver for the years 2017-2019.

AWARDS AND HONORS

- Recipient of **SOAR Best Poster Award** to participate at **Software Analytics Research Symposium** 2025
- **1st Runner-up** in **Innovations in Computer Science and Applied Computing (ICSAC)** in the category of Women In STEM. 2025
- Recipient of **Graduate Travel Award** for attending the International Conference on Software Engineering, 2025, in Ottawa, Canada. 2025

- Recipient of *SOAR Distinguished Research Award* to participate at **Software Analytics Research Symposium 2024**
- Recipient of *SOAR Woman of the Year Research Award* to participate at **Software Analytics Research Symposium 2024**
- **Winner (General Category)** in **Innovations in Computer Science & Applied Computing (ICSAC)** 2024
- Recipient of *Geddes Award* issued by **Keith Geddes** for high academic standing and research productivity. The Geddes Award intends to be a bonus over and above any regular funding to recognize excellent performance. 2022
- Recipient *Chancellor's Gold Medal* and *Summa Cum Laude* at the **19th Convocation of East West University** for excellent academic performance 2020
- Recipient of *Prime Minister Gold Medal* issued by **Bangladesh University Grants Commission (UGC)** for achieving the highest marks or CGPA in undergraduate and postgraduate exams 2019

REVIEW EXPERIENCES

- **Junior Program Committee Member:** Served as Junior PC member in the *Technical Papers* track at the International Conference on Mining Software Repositories (MSR) 2025
- **Program Committee Member:** Served as a PC member in *AI Models/Data* track at the International Conference on Evaluation and Assessment in Software Engineering (EASE) 2025

TALKS AND TUTORIALS

- **Lightening Talk** - Improving The Usability of SWfMSs Using Group Discussion: A Case Study on Galaxy. *Annual Canadian Celebration of Women in Computing Conference (CAN-CWIC)* 2022
- **Tutorial** - Handling Scientific Workflows. *1st EDI Initiative Workshop* 2025

PROFESSIONAL RESPONSIBILITIES

- **Social Media Coordinator** - Managed and coordinated social media communications for the Software Analytics Research Symposium (SOAR), 2025.
- **General Member in Election and Referenda Committee** - Graduate Students' Association, University of Saskatchewan, 2021-2022
- **Vice President - Social** - Computer Science Graduate Council (CSGC), University of Saskatchewan, 2021-2022

TEACHING ASSISTANTSHIP

- **CMPT140:** *Introduction to Creative Computing*, Department of Computer Science, University of Saskatchewan.
- **CMPT141:** *Introduction to Computer Science*, Department of Computer Science, University of Saskatchewan.
- **CMPT145:** *Principles of Computer Science*, Department of Computer Science, University of Saskatchewan.
- **CMPT270:** *Developing Object-Oriented Systems*, Department of Computer Science, University of Saskatchewan.
- **CMPT280:** *Intermediate Data Structures and Algorithms*, Department of Computer Science, University of Saskatchewan.

REFEREES

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 Professor, Department of
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