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CAREER OBJECTIVES

My career objectives are – (1) conducting cutting edge and impactful research in Software Engineering and challenging myself with the robust, emerging research problems, (2) promoting **novel, cost-effective and efficient solutions**, (3) honing my research, development and supervision skills through continuous learning, active collaborations, and extensive self-reflection.

EDUCATION

Doctor of Philosophy, Computer Science/Software Engineering
University of Saskatchewan, Canada
May 2020 – May 2024 (Expected)
Course Average: **93.50%**
Advisor: Prof. Dr. Chanchal K. Roy

Master of Science, Computer Science/Software Engineering
University of Saskatchewan, Canada
May 2018 – April 2020
Course Average: **92.00%**
Thesis: Investigating the Quality Aspects of Crowd-Sourced Developer Forum: A Case Study of Stack Overflow
Advisor: Prof. Dr. Chanchal K. Roy
Awards: **University of Saskatchewan Graduate Thesis Award 2020** + **Research Excellence Award 2020 (CS)** + **Dr. Keith Geddes Award 2020** + Dr. Keith Geddes Award 2019 (Nomination)

PUBLICATIONS

[1] **Saikat Mondal**, M. M. Rahman, C. K. Roy, and K. Schneider, *"The Reproducibility of Programming-Related Issues in Stack Overflow Questions"*. Empirical Software Engineering Journal (**EMSE**), pp. 59. (Impact Factor = **3.48**)

[2] **Saikat Mondal**, G. Uddin, and C. K. Roy, *"Automatic Prediction of Rejected Edits in Stack Overflow"*. Empirical Software Engineering Journal (**EMSE**), pp. 45. (Submission Number: EMSE-D-22-00001) (Under Revision)

[3] **Saikat Mondal**, and B. Roy, *"Reproducibility Challenges and Their Impacts on Technical*

Q&A Websites: The Practitioners' Perspectives". ACM 15th Innovations in Software Engineering Conference (ISEC 2022), pp. 11, DA-IICT Gandhinagar, India, February 2022.

[4] **Saikat Mondal**, G. Uddin and C. K. Roy, *"Rollback Edit Inconsistencies in Developer Forum"*. IEEE 18th International Conference on Mining Software Repositories (**MSR 2021**), pp. 12, Madrid, Spain, May 2021.

[5] **Saikat Mondal**, C M K. Saifullah, A. Bhattacharjee, M. M. Rahman, and C. K. Roy, *"Early Detection and Guidelines to Improve Unanswered Questions on Stack Overflow"*. ACM 14th Innovation in Software Engineering Conference (ISEC 2021), pp. 11, Bhubaneswar, India, February 2021

[6] **Saikat Mondal**, G. Uddin and C. K. Roy, *"Automatic Identification of Rollback Edit with Reasons in Stack Overflow Q&A Site"*. In Proceeding of the 36th IEEE International Conference on Software Maintenance and Evolution (**ICSME 2020** RR Track), pp. 856-856, Adelaide, Australia, September 2020.

[7] **Saikat Mondal**, M. M. Rahman and C. K. Roy, *"Can Issues Reported at Stack Overflow Questions be Reproduced? An Exploratory Study"*. In Proceeding of the IEEE 16th International Conference on Mining Software Repositories (**MSR 2019**), pp. 479-489, Montreal, Canada, May 2019.

[8] **Saikat Mondal**, M. M. Rahman and C. K. Roy, *"Do Subjectivity and Objectivity Always Agree? A Case Study with Stack Overflow Questions"*, Journal of Systems & Software (**JSS**). (Submission Number: JSS-D-19-00693) (Under Revise and Resubmit)

[9] M. Raihan, P.K. Mandal, M. M. Islam, T. Hossain, P. Ghosh, S.A. Shaj, A. Anik, M. R. Chowdhury, **Saikat Mondal**, and A. More, *"Risk Prediction of Ischemic Heart Disease Using Artificial Neural Network"*. In Proceeding of the International Conference on Electrical, Computer and Communication Engineering (ECCE 2019), pp. 1-5, February 2019

[10] M. Raihan, M. M. Islam, P. Ghosh, S.A. Shaj, M. R. Chowdhury, **Saikat Mondal** and A. More, *"A Comprehensive Analysis on Risk Prediction of Acute Coronary Syndrome Using Machine Learning Approaches"*. In Proceeding of the 21st International Conference of Computer and Information Technology (ICCIT 2018), pp. 1-6, IEEE, Dhaka, Bangladesh, December 2018

[11] P. Nag, **Saikat Mondal**, F. Ahmed, A. More and M. Raihan, *"A Simple Acute Myocardial Infarction (Heart Attack) Prediction System Using Clinical Data and Data Mining Techniques"*. In Proceedings of 20th International Conference of Computer and Information Technology (ICCIT 2017), pp. 1-6, IEEE, Dhaka, Bangladesh, December 2017

[12] M. Raihan, **Saikat Mondal**, A. More, M. O. F. Sagor, G. Sikder, M. A. Majumder, M. A. A. Manjur and K. Ghosh, *"Smartphone Based Ischemic Heart Disease (Heart Attack) Risk Prediction using Clinical Data and Data Mining Approaches, a Prototype Design"*. In Proceedings of the 19th International Conference on Computer and Information Technology (ICCIT 2016), pp. 299-303, IEEE, Dhaka, Bangladesh, December 2016.

[13] **Saikat Mondal**, R. Debnath and B.K. Mondal, *"An Improved Color Image Steganography Technique in Spatial Domain"*. In Proceedings of the 9th International Conference on Electrical and Computer Engineering (ICECE 2016), pp. 582-585, IEEE, Dhaka, Bangladesh, December 2016.

[14] A.K Bairagi, **Saikat Mondal** and R. Debnath, *"A Robust RGB Channel Based Image*

Steganography Technique using a Secret Key". In Proceedings of the 16th International Conference on Computer and Information Technology (ICCIT 2013), pp. 81-87, IEEE, Khulna, Bangladesh, March 2014

[15] A. K. Bairagi, **Saikat Mondal** and A. K. Mondal, *"A Dynamic Approach in Substitution Based Audio Steganography"*. In Proceedings of the International Conference on Informatics, Electronics & Vision (ICIEV 2012), pp. 501-504, IEEE, Dhaka, Bangladesh, May 2012

[16] M.S. Rahman, **Saikat Mondal**, S. K. Ghosh and M. M. Rahman, *"A New Approach of Extendable Multicast Routing Protocol in MANET"*. In Proceedings of the 13th International Conference on Computer and Information Technology (ICCIT 2010), pp. 120-124, IEEE, Dhaka, Bangladesh, December 2010

AWARDS AND ACHIEVEMENTS

[2021] 2020 University of Saskatchewan Graduate Thesis Award: Awarded to *only one* M.Sc. student by the University of Saskatchewan for the best M.Sc. thesis in the area of Physical and Engineering Science.

[2021] 2020 Research Excellence Award (Best M.Sc. Thesis Award): Awarded to *only one* M.Sc. student by the Department of Computer Science, University of Saskatchewan, for outstanding research and academic performance in the **M.Sc.** level.

[2021] People's Choice Award: Awarded by the Computer Science and Bioinformatics Symposium of the University of Saskatchewan for the poster *"The Reproducibility of Programming-Related Issues in Stack Overflow Questions"*.

[2020] Dr. Keith Geddes Award, Student of the Year: Awarded to *only one* M.Sc. student by the Department of Computer Science, University of Saskatchewan, for outstanding research and academic performance in the ongoing **M.Sc.** program. Award value: $2,500.

[2019] Dr. Keith Geddes Award Nomination: Nominated by the Department of Computer Science, University of Saskatchewan, for outstanding research and academic performance in the ongoing **M.Sc.** program.

[2019] Graduate Travel Award: Awarded by University of Saskatchewan for MSR 2019 travel to Montreal, Canada. Award value: $350.

[2015] Best Faculty Award: In recognition of outstanding contributions and dedication to academic achievement in Computer Science and Engineering Discipline, School of Science, Engineering and Technology, Khulna University, Bangladesh.

[2014] Outstanding Service Award: Awarded by the 16th International Conference on Computer and Information Technology (ICCIT 2013), Bangladesh, to recognize my outstanding contributions and dedication for successfully organizing the renowned conference.

[2012] Icon of the Month Award: Awarded by Samsung R&D Institute Bangladesh to recognize the outstanding contribution in research and development projects towards the progress of the company.

[2012] Exceptional Engineer Award: Awarded by Samsung R&D Institute Bangladesh to recognize the excellent community contribution on behalf of the company.

[2001] Best Student Award: Awarded by the Member of Parliament (MP), Khulna-1, Bangladesh, for obtaining the highest marks among around 5K students who attended the Secondary School Certificate (SSC) exam from Khulna-1 in 2000.

[2006] Math Olympiad Award: Awarded by Khulna University, Bangladesh, for being a *champion* in the Math Olympiad.

[2008] Programming Contest Award: Awarded by Khulna University, Bangladesh, for being the *first runner-up* in the programming contest.

[2000] Champion and Best Speaker Awards: Our debate group became a champion, and I was awarded as the best speaker in the inter-school debate competition organized by Rupantar, Batiaghata, Khulna, Bangladesh.

[1990–2002] Cultural Awards: I won a number of awards for being top in cultural competitions (e.g., debate, poetry recitation, speech, acting).

GRANTS & SCHOLARSHIPS

[2021-2022] Faculty Scholarship & Graduate Teaching Fellowship: Awarded by the Department of Computer Science, the University of Saskatchewan for the Ph.D. program. Scholarship amount: $24,500/year for 1 year.

[2021] GSA Bursary: Awarded by the Graduate Students' Association (GSA), University of Saskatchewan for the financial need, good community involvement and strong academic performance. Scholarship amount: $750.

[2021] Faculty Scholarship: Awarded by the Department of Computer Science, University of Saskatchewan for the research excellence in the ongoing Ph.D. program as top ups. Scholarship amount: ≈ $2,500.

[2020-2021] Faculty Scholarship & Graduate Teaching Fellowship: Awarded by the Department of Computer Science, the University of Saskatchewan for the Ph.D. program. Scholarship amount: $24,500/year for 1 year.

[2020] Faculty Scholarship & Graduate Teaching Fellowship: Awarded by the Department of Computer Science, University of Saskatchewan for the Ph.D. program. Scholarship amount: $1,333/month for 4 months.

[2019-2020] Faculty Scholarship: Awarded by the Department of Computer Science, University of Saskatchewan for the research excellence in the ongoing M.Sc. program as top ups. Scholarship amount: ≈ $8,000.

[2019] GSA Bursary: Awarded by the Graduate Students' Association (GSA), University of Saskatchewan for the financial need, good community involvement and strong academic performance. Scholarship amount: $1,000.

[2018-2020] Faculty Scholarship & Graduate Teaching Fellowship: Awarded by the Department of Computer Science, the University of Saskatchewan for the M.Sc. program. Scholarship amount: $20,000/year for 2 years.

[2018] Khulna University Research Grant: Awarded by Khulna University Research Cell, Bangladesh, for research excellence when I was an assistant professor of Khulna University.

Grant amount: ≈ $1,000.

[2005–2010] Merit List Scholarship: Awarded by Khulna University, Bangladesh, from 2005 to 2010 for academic excellence in the B.Sc. program.

[2000–2002] Merit List Scholarship: Awarded by Government Education Board (Jessore) from 2000 to 2002 for excellence in 2000 SSC exam.

EMPLOYMENT HISTORY

Graduate Teaching Assistant
September 2018–Current University of Saskatchewan, Canada

I was appointed as a graduate research & teaching assistant in the Department of Computer Science in 2018. I am accounted for graduate research & development, guiding & evaluating students' course projects and marking undergraduate courses.

Assistant Professor
July 2015–Current Khulna University, Bangladesh

Appointed as a lecturer and later promoted as an Assistant Professor in the Department of Computer Science and Engineering, Khulna University. I was accounted for (1) teaching undergraduate classes, curricular innovation, course planning, course evaluation, conducting exams and publishing grades, (2) conducting research, supervising undergrad theses, (3) conducting academic projects, organizing student contests, organizing project festivals, leading students in the regional/national level contests, (4) managing department's computer club, library, website and (5) conducting administrative affairs such as admission test management, departmental purchase inspection, and various other official decision makings.

Assistant Director of Students' Affairs
December 2012–April 2016 Khulna University, Bangladesh

I was appointed as an Assistant Director of Students' Affairs (in addition to a faculty member) at Khulna University. I was accounted for (1) students' welfare of the university, (2) organizing cultural events and festivals, (3) celebrating national days, (4) advising cultural organizations of the university, and (5) promoting law and order of the university.

Lecturer
May 2012–July 2015 Khulna University, Bangladesh

Appointed as a full-time faculty member in the Department of Computer Science and Engineering, Khulna University. I was accounted for (1) teaching undergraduate classes, curricular innovation, course planning, course evaluation, conducting exams and publishing grades, (2) conducting research, (3) conducting academic projects, organizing student contests, organizing project festivals, leading students in the regional/national level contests, (4) managing department's computer club, library, website and (5) conducting administrative affairs such as admission test management, departmental purchase inspection, and various other official decision makings.

Software Engineer
November 2010–May 2012 Solution Lab, Samsung R&D Institute Bangladesh Ltd.

I was appointed as a software engineer and got the opportunity to work under the advanced R&D division (solution lab) due to my outstanding research and development skills. I was

accounted for (1) solving research problems, developing software (application & system) and reporting project updates, (2) exposing novel research ideas on wireless connectivity and writing research proposals.

Research Assistant
August 2015–May 2018 Rural Health Progress Trust, Maharashtra, India

I was accounted for (1) conducting research on detecting heart diseases by analyzing real-world data, (2) collecting data from online applications & heart camping and processing them, and (3) supervising the research team.

RESEARCH

The quality of the content shared in crowd-sourced developer forums is paramount to ensure flawless support for software developers with their programming problems. Stack Overflow is the most popular programming-related Q&A forum with 22 million questions, 33 million answers and 17 million registered users (developers). Stack Overflow allows users to suggest edits to posts (i.e., answers and questions) to improve their quality. Unfortunately, such edits are often rejected due to undesired edits or violating edit guidelines. Moreover, subjectivity bias in deciding whether an edit is desired or not could introduce inconsistencies in the rejected edits. Such a scenario can be detrimental, frustrating and demotivating to the users who aim to provide good-quality edits. Therefore, my research first focuses on identifying the rejected edit reasons and inconsistency types. Then it offers tools and techniques to assist Stack Overflow users suggesting acceptable edits by automatically identifying rejected edits with reasons and inconsistent edits. However, locating the suggested edits that promote quality by manually investigating the posts is challenging and time-consuming. Thus, I also plan to introduce tools to identify the potential edits automatically by analyzing the contents of posts.

I employ quality metrics (e.g., reproducibility, consistency, readability), static code analysis, text processing, Machine Learning (ML), Natural Language Processing (NLP), and software repository mining in my research. My target is to support developers to – ✔ improve the quality of the questions so that they receive **quick and appropriate solutions**, **save** developers' valuable **time**, help to **continue** normal **development flow** and ✔ improve the quality of the answers to **ensure** their **reliable use** in software development.

Ph.D. Research Projects

I have been working on the following research projects as a part of my Ph.D. courses and research works. Papers produced from these projects have been accepted/published/-submitted at the highly selective peer-reviewed conferences of Software Engineering such as **ICSME, MSR** and at the top-ranked journals such as **EMSE**.

[1] **[2020] iEdit:** This study enhances *Rollback Edit Inconsistencies Detector* and investigates inconsistencies both in accepted and rejected edits. It aims to introduce a tool, `iEdit`, to detect inconsistent edits automatically. *Technology & Concepts:* Empirical study, qualitative and quantitative analysis, user study, rule-based detection. (To be submitted in Automated Software Engineering (**AUSE**) journal)

[2] **[2020] Identification of Questions that Require Code Snippets:** Stack Overflow questions often discuss programming-related problems that require example code snippets to understand and resolve the problems. However, users often miss including

code snippets with questions during their submission, which prevents them from receiving appropriate solutions. Thus, I attempt to identify the questions that need code snippets and introduce tool support that recommends users to include code snippets (if necessary) by analyzing the question texts. *Technology & Concepts:* Empirical study, qualitative and quantitative analysis, discourse analysis. (this work is being prepared for a **ASE 2022** submission)

[3] **[2020] EditEx:** This study attempts to introduce tool supports to identify rejected edits with the potential reasons automatically. *Technology & Concepts:* Empirical study, qualitative analysis, user study, natural language processing, Machine Learning (ML) and rule-based classifier, cognitive workload using NASA TLX. (Phase-I was accepted in **ICSME 2020** RR track, and Phase-II is under revision in **EMSE**). `EditEx` installation tutorial can be found on a YouTube video

[4] **[2021] Issue Reproducer (✢):** It is an extended version of our earlier work published in **MSR 2019**. (accepted in **EMSE**)

[5] **[2021] Rollback Edit Inconsistencies Detector:** This study enhances an M.Sc. research project. It identifies eight rollback edit inconsistencies and introduces algorithms to detect such inconsistencies automatically. *Technology & Concepts:* Empirical study, qualitative and quantitative analysis, user study, rule-based detection. (one full paper accepted in **MSR 2021**)

[6] **[2020] Practitioners' Perspectives on Issue Reproducibility Challenges:** Our previous study (MSR 2019) produced a catalogue of potential challenges that hinder the reproducibility of issues reported at Stack Overflow questions. This study attempts to understand developers' perspectives (e.g., agreement, impact) on those challenges by surveying 53 users of Stack Overflow. *Technology & Concepts:* User study, cognitive workload using NASA TLX, Likert scale, open/close coding. (one full paper accepted in **ISEC 2022**)

[7] **[2020] Technology Usage Stability Miner:** This study attempts to find the technology usage stability by analyzing the questions answering traces of 21K users of Stack Overflow submitted over eleven years. *Technology & Concepts:* Empirical study, software repository mining, visualization. (to be submitted in a suitable venue soon)

[8] **[2021] ReproStrength:** This study investigates the Strength of Reproducibility in Machine Learning Models to Predict Unanswered/Unresolved Questions of Stack Overflow. *Technology & Concepts:* Feature extraction & analysis, Machine Learning models, explainable machine learning, quality metrics. (to be submitted in a suitable venue soon)

Ph.D. Research Projects

I completed the following research projects during my Master in Computer Science at the University of Saskatchewan:

[9] **[2018] Issue-Reproducer:** This study (1) investigates whether the issues reported at Stack Overflow questions could be reproduced or not (one full paper at **MSR 2019**)

[10] **[2019] Unanswered Question Predictor:** This study predicts the potentially unanswered questions in advance during question submission that could improve the

question and thus receive the answers in time. (one full paper at **ISEC 2021**)

[11] **[2019] Rollback Edit Reasons and Inconsistencies Detector:** This study investigates the reasons behind rollback edits and how the reasons could be detected automatically. Besides, it expose the inconsistencies of rollback edits and their detection technique. (one full paper at **MSR 2021**, one paper at **ICSME 2020** RR track, one article is under review in **EMSE**)

[12] **[2018] Agreement between Subjectivity and Objectivity:** This study investigates whether the subjective evaluation mechanism of Stack Overflow agrees with the objective measures. (one article at **JSS** under reject and resubmit stage)

Global Outreach & Research Collaborations

I collaborated with leading researchers from two internationally reputed universities and one institution for several research projects. I led each collaborative project by brainstorming the core ideas, conducting the experiments, and writing the papers. The collaborators helped refine my ideas with professional insights and helped improve the papers with high-quality feedback. My collaborators are as follows:

[2019–] Gias Uddin, University of Calgary, Canada: We collaborated on *Rollback Edit Reasons and Inconsistencies Detector* project that produced multiple papers - on full paper at **MSR 2021**, one paper at **ICSME 2020** RR track and one article is under review in **EMSE** journal.

[2018–] Masud Rahman, Dalhousie University, Canada: We collaborated on *Issue Reproducer* project that produced on full paper at **MSR 2019**, one article is accepted in **EMSE** journal.

[2012–2018] Arun More, Rural Health Progress Trust, Latur, India: We collaborated on multiple projects when I was a faculty member at Khulna University that produced multiple papers.

Research Talks/Posters/Demonstrations

I attended conferences (physically & virtually) and workshops over the last ten years and delivered dozens of research talks on my research topics. Such attendance and talks allowed me (1) to collaborate with the leading researchers from my area, (2) to better communicate my ideas with a large audience, and (3) to stay up-to-date with the hot research trends. The following research talks were produced from my works:

[1] **Saikat Mondal**, M. M. Rahman, C. K. Roy, and K. Schneider, *"The Reproducibility of Programming-Related Issues in Stack Overflow Questions"*. University of Saskatchewan, Canada.

[2] **Saikat Mondal**, C M K. Saifullah, A. Bhattacharjee, M. M. Rahman, and C. K. Roy. 2021. *"Early Detection and Guidelines to Improve Unanswered Questions on Stack Overflow"*. ISEC, India

[3] **Saikat Mondal**, G. Uddin and C. K. Roy. 2020. *"Automatic Identification of Rollback Edit with Reasons in Stack Overflow Q&A Site"*. ICSME, Adelaide, Australia

[4] **S. Mondal**, M. M. Rahman and C. K. Roy. 2019 *"Can Issues Reported at Stack Over-*

flow Questions be Reproduced? An Exploratory Study". MSR, Montreal, Canada

[5] M. Raihan, **Saikat Mondal**, A. More, M. O. F. Sagor, G. Sikder, M. A. Majumder, M. A. A. Manjur and K. Ghosh. 2016. *"Smartphone Based Ischemic Heart Disease (Heart Attack) Risk Prediction using Clinical Data and Data Mining Approaches, a Prototype Design".* ICCIT, Bangladesh

[6] **Saikat Mondal**, R. Debnath and B.K. Mondal. 2016. *"An Improved Color Image Steganography Technique in Spatial Domain".* ICECE, Bangladesh

[7] **Saikat Mondal**, R. Debnath and B.K. Mondal. 2016. *"An Improved Color Image Steganography Technique in Spatial Domain".* ICECE, Bangladesh

[8] **Saikat Mondal**. 2015. *"Innovations for Service".* **Invited Talk**, Divisional ICT Fair, Ministry of ICT, Bangladesh

[9] A.K Bairagi, **Saikat Mondal** and R. Debnath. 2014. *"A Robust RGB Channel Based Image Steganography Technique using a Secret Key".* ICCIT, Bangladesh

[10] **Saikat Mondal**. 2014. *"PHP for Software Development".* **Invited Talk**, Google Developers Group (GDG) Bangla, Khulna University Chapter, Bangladesh

[11] M.S. Rahman, **Saikat Mondal**, S. K. Ghosh and M. M. Rahman. 2010. *"A New Approach of Extendable Multicast Routing Protocol in MANET".* ICCIT, Bangladesh

Research Tools & Technology Experience

[1] **Software Development & Maintenance:** Eclipse, PyCharm, IntelliJ, Visual Studio, JUnit, JavaParser, Jsoup, PMD, FindBugs, Roslyn, Esprima and Maven.

[2] **Software Version Control:** Git, GitHub.

[3] **Machine Learning & Data Mining:** WEKA, R, MATLAB, Decision Trees, Random Forest, XGBoost, CART, Logistic Regression, Naive Bayes, Bayes Net, Linear Regression, Resampling, Bagging, Boosting, Stacking, and Ensemble Learning.

[4] **Code Search & Information Retrieval:** Lucene.

[5] **Natural Language Processing:** Stanford CoreNLP, Mallet, POS tagging, Sentiment analysis, Term weighting, Text summarization, Discourse Analysis, and Semantic similarity analysis.

[6] **Statistics & Data Modelling:** Probability distributions, Random sampling, Confidence interval, Central tendency, Data centrality, and Statistical significance tests.

[7] **Reporting & Prototyping:** LaTeX, Photoshop and Pencil.

[8] **Programming Languages:** Java, Python and C/C++.

[9] **Research Collaboration:** Overleaf, Slack, MS team.

Professional Projects

Conducted several research-based projects while working in Samsung R&D Institute

Bangladesh and won the Icon of the Month award. I also completed several research and development projects while I was a faculty in Khulna University, Bangladesh.

• **Protein Fold Classification Using Machine Learning Technique**, Research Cell, Khulna University, Bangladesh

• **IPC Mailbox System for VxWorks**, Connectivity Division, Samsung R&D Institute Bangladesh

• **DSP Software Development for Camera and Channel – Phase I and II**, Samsung Reconfigurable Processor Division, Samsung R&D Institute Bangladesh

• **Spyder Wi-Fi Display**, Connectivity Division, Samsung Bangladesh R&D Center Ltd

• **Home Entertainment WLAN SOC Host Software Development**, Connectivity Division, Samsung R&D Institute Bangladesh

• **Khulna University (www.ku.ac.bd) and ICCIT 2013 (www.iccit.org.bd/2013) Website (Design and Development)**, Khulna University, Bangladesh

Sub-Reviewer

Serving as a sub-reviewer of several top-tier conferences of Software Engineering.

• International Conference on Software Engineering (ICSE)

• International Conference on Automated Software Engineering (ASE)

• International Conference on Software Maintenance and Evolution (ICSME)

• International Conference on Software Analysis, Evolution, and Reengineering (SANER)

• International Working Conference on Mining Software Repositories (MSR)

• International Working Conference on Source Code Analysis and Manipulation (SCAM)

• International Conference on Program Comprehension (ICPC)

• International Conference on Computer Science and Software Engineering (CASCON)

TEACHING EXPERIENCE

Over the last nine years, I taught several courses and evaluated exams in three different universities in various capacities.

Khulna University

I taught several undergraduate-level courses at Khulna University from 2012 to 2018. I was accounted for course syllabus design, teaching classes, designing questionnaires, conducting exams, evaluating exams, and then publishing the grades. Besides regular classes, I also supervised the software development projects and thesis undertaken by the students.

• Software Development Project (CSE 2200)

- Artificial Intelligence (CSE 4205)
- Structured Programming (CSE 1103)
- Compiler Design (CSE 4105)
- Algorithms (CSE 2201)
- Object Oriented Programming (CSE 1201)
- Pattern Recognition (CSE 4221)
- Web Programming Project (CSE 3200)

The detailed syllabus of these courses can be found at the **website** of Khulna University.

North Western University

I taught several undergraduate-level courses at North Western University from 2012 to 2018 as a part-time faculty. I was accounted for teaching classes, designing questionnaires, conducting exams, evaluating exams, and then publishing the grades. Besides regular classes, I also supervised the software development projects undertaken by the students.

- Software Development Project/Sessional
- Computer Graphics and Pattern Recognition (CSE 4301)
- Computer Graphics and Pattern Recognition Lab (CSE 4302)
- Compiler Design (CSE 3207)
- Compiler Design Lab (CSE 3208)

University of Saskatchewan

In Winter 2022 semester, I have been guiding and evaluating students' software engineering projects of **CMPT 370: Intermediate Software Engineering.** Previously, I evaluated the assignments of several undergraduate-level courses at the University of Saskatchewan from 2018 to 2021 as follows:

- CMPT 141: Introduction to Computer Science
- CMPT 214: Programming Principles and Practice
- CMPT 280: Intermediate Data Structures and Algorithms

The detailed syllabus of these courses can be found at **University of Saskatchewan website**.

ACADEMIC EXCELLENCE

I was committed to academic excellence throughout my academic career as shown below.

Ph.D. Courses

I took two courses during my Ph.D. in Computer Science at the University of Saskatchewan

and scored an average of **93.50%**. These courses involved multiple assignments, paper reviews, presentations, a term project, term final exam and a term paper. The papers of my term projects are ready to submit at the upcoming conference.

- CMPT 898: Human-Driven Software Engineering for Scientific Research (94%)
- CMPT 824: Graph Drawing and Network Visualization (93%)

M.Sc. Courses

I took four during my Masters and Ph.D. in Computer Science at the University of Saskatchewan and scored an average of **92%**. These courses involved multiple assignments, paper reviews, presentations, a term project, and a term paper. Several of my term projects produced publications later and thus were included in my thesis due to their high quality.

- CMPT 846: Software Maintenance & Evolution (93%)
- CMPT 816: Advanced Software Engineering (93%)
- CMPT 856 Topics in Software Engineering (93%)
- CMPT 820: Topics in Learning and Intelligent Systems (89%)

The detailed syllabus of these courses can be found at the **website** of University of Saskatchewan.

Undergraduate-Level Courses

A total of **160** credits were completed during the four years of my Bachelor of Computer Science and Engineering at Khulna University. In my class, I scored the highest CGPA among 35 students.

LEADERSHIP & COMMUNITY SERVICES

I served academic, community and professional organizations, and gained experience in **leadership, interpersonal communications, and in executing organizational goals**. To date, I served at the following leadership positions:

[1] **[2021–2022] President**, Computer Science Graduate Council (CSGC), Department of Computer Science, University of Saskatchewan, Canada.

[2] **[2020–2021] GSA Representative**, Computer Science Graduate Council (CSGC), Department of Computer Science, University of Saskatchewan, Canada.

[3] **[2020–2021] Webmaster**, IEEE Canada North Saskatchewan Chapter.

[4] **[2019–current] Social Chair**, Software Research Lab, Department of Computer Science, University of Saskatchewan, Canada.

[5] **[2021] Online Program Convener**, Pahela Baishakh & Eid Adda, Khulna University Alumni Association, Canada.

[6] **[2021–current] Executive Member (elected)**, Khulna University Alumni Association, Canada.

[7] **[2021] Member of Technical Support Team**, SSPP Fund Raising Banquet, Saskatoon, Canada.

[8] **[2019–2020] Vice President Social**, Computer Science Graduate Council (CSGC), Department of Computer Science, University of Saskatchewan, Canada.

[9] **[2012–2016] Assistant Director of Students' Affairs**, Khulna University, Bangladesh.

[10] **[2012–2018] Founder and Director**, Suresh Sreety Shikkha Niketon (An honorary full-free school for the poor children), Batiaghata, Khulna, Bangladesh.

[11] **[2012–2018] Advisor**, Club for Updated Search on Computer (CLUSTER), Khulna University, Bangladesh.

[12] **[2012–2018] Advisor**, Seminar Library, Department of Computer Science, Khulna University, Bangladesh.

[13] **[2014–2018] Mentor**, Bangladesh Association of Software and Information Services (BASIS), Khulna University Chapter.

[14] **[2015–current] Chief Advisor**, Tech For Mankind Bangladesh.

[15] **[2015–2018] Coordinator**, Google Developers Group-GDG Bangla, Khulna University Chapter, Bangladesh.

[16] **[2014–2015] Executive Member (elected)**, Khulna University Teachers' Association, Khulna University, Bangladesh.

[17] **[2012–2015] Program Admin**, Microsoft Developer Network (MSDN) Academic Alliance, Department of Computer Science, Khulna University, Bangladesh.

[18] **[2010–2012] Program Coordinator & Volunteer**, Computers Are Free For Everyone (CAFFE), Dhaka, Bangladesh.

[19] **[2013–2014] Web Admin**, 16th International Conference on Computer and Information Technology-2013 (ICCIT-13), Bangladesh.

[20] **[2013–2014] Web Admin**, Khulna University Web Site, Khulna University, Bangladesh.

[21] **[2012–2018] Programming Contest Coordinator and Coach**, Department of Computer Science, Khulna University, Bangladesh.

[22] **[2012–2015] Sports Coordinator**, Department of Computer Science, Khulna University, Bangladesh.

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TRAINING

I conducted the following training on research, teaching and software engineering:

• **Teaching Pedagogy (Induction, Module I and II)**, Center of Excellence in Teaching

and Learning and Institutional Quality Assurance Cell, Khulna University, Bangladesh.

• **Teaching Methodology**, Research Cell, Khulna University, Bangladesh.

• **Research Methodology**, Higher Education Quality Enhancement Project, Economics Discipline, Khulna University, Bangladesh.

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