



MD. JUBAIR IBNA MOSTAFA

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Education

Institute of Information Technology, University of Dhaka

January 2018 – June 2019

Master of Science in Software Engineering (MSSE)

CGPA: 3.96 out of 4.00

Institute of Information Technology, University of Dhaka

January 2014 – December 2017

Bachelor of Science in Software Engineering (BSSE)

CGPA: 3.93 out of 4.00

Research Interest

Software Engineering (SE), more specifically Software Analytics to explore software repositories and communities by leveraging Machine Learning (ML) to improve software quality, developers' productivity, and maintenance activities.

Research Projects

Textual Analysis using ML

July 2021 - Present

Sentiment analysis of GitHub issues, questions difficulty assessment in Stack Overflow

2 publications

Developers' Communities Analysis

January 2021 - Present

Developers' collaboration challenges

2 publications

Source Code Analysis

June 2017 - December 2020

Code clone, change coupling, metrics analysis of source code

3 publications

Publications

4.1 Journal

- Maliha Noushin Raida, Zannatun Naim Sristy, Nawshin Ulfat, Sheikh Moonwara Anjum Monisha, **Md. Jubair Ibna Mostafa**, and Md. Nazmul Haque. "A study on classifying stack overflow questions based on difficulty by utilizing contextual features" in *Journal of Systems and Software*, Volume: 208:111884, 2024. Elsevier

4.2 Book Chapter

- Abdullah Al Jobair, Suzad Mohammad, Zahin Raidah Maisha, **Md. Jubair Ibna Mostafa**, and Md. Nazmul Haque. "The ugly side of stack overflow: An in-depth exploration of the social dynamics of new users' engagement and community perception of them" in *Communications in Computer and Information Science* book series (CCIS, volume 1829), pages 243–265, Cham, 2023. Springer

4.3 Conference and Workshop Proceedings

- Zubair Rahman Tusar, Sadat Bin Sharfuddin, Muhtasim Abid, Md. Nazmul Haque, and **Md. Jubair Ibna Mostafa**. "Effectiveness of data augmentation and ensembling using transformer-based models for sentiment analysis: Software engineering perspective". in Proceedings of the *18th International Conference on Software Technologies, (ICSOT)*, Rome, Italy, July 10-12, pages 438–447 2023. SciTePress
- Abdullah Al Jobair, Suzad Mohammad, Zahin Raidah Maisha, **Md. Jubair Ibna Mostafa**, and Md. Nazmul Haque. "An empirical study on neophytes of stack overflow: How welcoming the community is towards them" in Proceedings of the *17th International Conference on Evaluation of Novel Approaches to Software Engineering, (ENASE)*, Online Streaming, April 25-26, pages 197–208, 2022. SciTePress
- **Md. Jubair Ibna Mostafa**. "An empirical study on clone evolution by analyzing clone lifetime" in Proceedings of the *13th IEEE International Workshop on Software Clones, (IWSC)*, Hangzhou, China, February 24, pages 20–26, 2019. IEEE
- Ali Zafar Sadiq, **Md. Jubair Ibna Mostafa**, and Kazi Sakib. "On the evolutionary relationship between change coupling and fix-inducing changes" in Proceedings of the *14th International Conference on Evaluation of Novel Approaches to Software Engineering, (ENASE)* 2019, Heraklion, Crete, Greece, May 4-5, pages 494–501, 2019. SciTePress

- Ali Zafar Sadiq, Ahmedul Kabir, Pritom Saha Akash, and **Md. Jubair Ibna Mostafa**. “Analyzing corrective maintenance using change coupled clusters at fix-inducing changes” in Proceedings of the *1st International Conference on Electrical, Computer and Communication Engineering (ECCE)*, pages 1–6, 2019. IEEE

Theses

Analyzing and Characterizing Code Clone Lifetime

for Master of Science in Software Engineering (MSSE) degree

[Link](#)

Clone Tracker: Tracking Inconsistent Clone Changes in A Clone Group

for Bachelor of Science in Software Engineering (BSSE) degree

[Link](#)

Teaching Experience

Department of CSE, IUT

September 2022 – Present

Assistant Professor

1 year 4 months

- Working as an assistant professor in the Department of Computer Science and Engineering (CSE) of the Islamic University of Technology (IUT): is responsible for doing research, designing syllabus and course contents, supervising undergrad research projects, and coordinating industry-academia collaboration

Department of CSE, IUT

January 2020 – August 2022

Lecturer

2 years 8 months

- Worked as a lecturer in the Department of Computer Science and Engineering (CSE) of the Islamic University of Technology (IUT): is responsible for developing course contents, conducting theory classes and lab sessions, supervising students' projects, and managing the internship of the students.

Short Course Programme of IIT, DU

January 2018 – August 19

Course Instructor

1 year 8 months

- Worked as a short course instructor for a class of twenty students weekly for 3 hours: was responsible for teaching programming courses named “Web Programming” and “Web Design”

Courses Taught

- | | |
|---|--|
| <ul style="list-style-type: none"> • Object Oriented Concept I • Object Oriented Concept II • Software Design and Analysis | <ul style="list-style-type: none"> • Software Metrics • Software Security • Software Requirement Specification and Analysis |
|---|--|

Internship

SELISE rockin Software Ltd., Dhaka

January 2017 – June 2017

Trainee

6 months

- **Investiere App:** Worked as a front-end software developer in the investiere team. Developed new features and fixed existing bugs by following the agile development process (SCRUM). Developed some parts of the new version of the software in Angular 2.0 and took part in SELISE School, tech talk, and cultural programs.
Technology used: Angular, Java

Academic Projects

- **Clone Tracker Plugin (CT):** A research and development-based project, completed as the final year Software Project Lab (SPL-3).
Clone codes require special attention from developers for their consistent update requirements to a clone group. Tracking changes in one clone instance and notifying other sibling clones can help to reduce inconsistent changes in a clone group. A **IntelliJ Idea Plugin** was developed by incorporating **NiCad** clone detector to support developers for such clone management activities. A small survey was conducted to measure the effectiveness and robustness of the Plugin and found it was useful for clone maintenance.
- **CO₂ Emission Prediction and Factors Analysis:** A regression-based CO₂ emission prediction model was developed and relevant factors were analyzed using R programming language as a final year Applied Data Science course project. A rigorous linear regression analysis was performed on the CO₂ data collected from the World Bank Data Library. It has been found that the emission follows a linear model, and important factors are fuel consumption, and a decrease in Forest and Agricultural land.

- **Graduate Verification System:** is a web application to validate graduate students' certificate credentials, developed for the Business Management course in the final year.
The website was designed for graduate students to facilitate the admission process by verifying credentials. From the site universities and governing bodies can benefit from using reporting facilities. The project was built by exercising the whole SDLC life cycle process. I contributed to requirement specification (SRS) and module development part. PHP Laravel framework and MySQL database were used to build the software.
- **Automated Student Profile System (ASPS):** A simple web application for student portfolio creation using C# language in MVC framework as the 3rd year Software Project Lab (SPL-2).
A web interface was built where students could create their profiles by giving academic details and sharing different resources (PDF, Files, etc.). Technology used: ASP.NET MVC4 and Entity Framework Database.
- **Dealer Business Management System (DBMS):** An Android application for a dealer to manage his everyday work with a mobile application for the sophomore year Software Project Lab (SPL-1).
A dealer needs to keep every record of his business every day, an Android app could help him/her deal, transaction, and reporting management. The app was developed by three team members, I contributed to Android User Interface development, design, and report writing. Technology used: Java, Android Studio 1.0 & SQLite.

Technical Skills

Languages: Java 8, C#, Python, C, PHP7, JavaScript, SQL, LaTeX

Technologies/Frameworks: ASP.NET MVC4, Angular 4.0, AngularJS, Android, Laravel, Web API 2.0, Bootstrap 3

Tools: IntelliJ Idea, WebStorm, Eclipse Luna, Visual Studio 2019, Jupyter, Weka 3

Source Control: Git

Project Management Tool: Jira, Trello

Scholarship and Fellowship

- **Graduate Research Fellowship-2018**, awarded by the Information and Communication Technology (ICT) Division for research on source code clone. <http://ims.ictd.gov.bd>
- **Govt. Honours Scholarship-2017**, awarded by Bangladesh Govt. to the meritorious students of Dhaka University for their excellent honors results, attendance, and overall performance.
- **Govt. HSC Scholarship-2012** in the general category, awarded by the Intermediate and Secondary Education Board Bangladesh to students for their excellent results in the Higher Secondary Certificate examination.
- **Govt. SSC Scholarship-2010** in the general category, awarded by the Intermediate and Secondary Education Board Bangladesh to students for their excellent results in the Secondary School Certificate examination.
- **Govt. Junior Secondary Scholarship-2008** in the Talent pool category, awarded by the Secondary and Higher Education Division Bangladesh to meritorious students for their extraordinary results in the 8th Grade examination.
- **Govt. Primary Scholarship-2005** in the Talent pool category, awarded by the Directorate of Primary Education Bangladesh to meritorious students for their extraordinary results in the 5th Grade examination.

Honors and Achievements

- **Judge** invited as an honorable judge of the Hackathon competition, an inter-university online IT festival "*ITverse*" arranged by IITSEC in 2022 and 2023: <https://drive.google.com/certificate-of-appreciation>.
- **Instructor** participated as a lab session instructor in the TEIN-CC and Asi@Connect Security workshop organized by IIT, DU in 2021
- **Founding President** elected as the president of the software engineers' club, IIT Software Engineers Community (IITSEC) in 2017. <https://iitsecdu.com>
- **Badge** achieved HackerRank Gold badge for Java: jubair.

Co-curricular and Extracurricular

- Organized and attended DevOps workshop 2019 under DSSE research group: <https://dsse.github.io/events/>.
- Participant as a team member in SUST IUPC 2015, QAAIPC 2014 programming contest
- Core organizing member of Graduation Tour 2018 to India.
- One of the core members of the organizing team of "Freshers' Reception & Farewall Program 2016" of IIT, DU.