

Fazle Mohammed Tawsif

Research Interests

- Software Engineering

- Intelligent Systems

Education

2014–2017 Bachelor of Science in Software Engineering, Institute of Information & Technology, University of Dhaka, Dhaka, Bangladesh.
CGPA: 3.81/4.00

Journal Publications

Indexing: Scopus. CiteScore: 1.0, h-index: 26 **Tawsif, F. M., Mahmud, Q. I., Shuchi, N. Z., Mohaimen, A. & Tasnim, A. (2020). A Machine Learning Approach to Predict Movie Revenue Based on Pre-Released Movie Metadata.** Journal of Computer Science, 16(6), 749-767. DOI: <https://doi.org/10.3844/jcssp.2020.749.767>.

Research Projects

Java, Token Matching, Testing **Language Independent Program Slicing**, Using the program slicing technique to find the minimal slice of a program without any dependency on a programming language or configuration **Github Link:** <https://github.com/tawsif93/LIPS>.

Java, JSoup, Lucene 5.0, TF-IDF, Cosine Similarity **Automated Bug Assignment**, An automated technique for assigning bugs using developer expertise and data from the previous bug solving experiences. It parses the commit text and Bugzilla or JIRA bug descriptions for a developer and assigns the developer to the new bug according to the bug similarities. **Github Link:** <https://github.com/tawsif93/DocumentSimilarity>.

Research Projects as Supervisor (Ongoing)

Program slicing, Patch Prioritization, Fault Localization **Syntactic and Semantic Similarities for Patch Prioritization**, Combination of Syntactic and Semantic Similarities for Patch Prioritization using Insertion mutation operation. Genealogical measure semantic similarity and normalized longest common subsequence, normalized edit distance, cosine similarity, and Jaccard similarity index are used to capture syntactic similarity.

Object Detection, Tensorflow, **Object Detection Using Tensorflow And Inception Architecture**, Using TensorFlow and inception layer architecture to detect objects after processing on the Convolutional layer.

Development Projects

NodeJs, Google APIs, Docker, MongoDB, Redis, Github Action **Multiplayer UNO Game (Ongoing)**, It is online based multiplayer project which is under development. It is being built using NodeJs Typescript and Angular on the front-end, MongoDB is used for databased and Redis for caching. It is deployed on a Kubernetes cluster using Github Action CI/CD pipeline. Will be public after completing the proper unit testing..

Android, Java, Google APIs, MySQL, GPS Protocols **ATS PRO**, A GPS device based tracking project which provides tracking service to the vehicle owners. It was built on MVC architecture. This App provides the facility to view the live track, overall reports such as mileage, fuel, parking etc. with graphical dashboard. **Github Link:** <https://github.com/tawsif93/ATS-Tracking-Service>.

Android, Java, PHP, MySQL **Easy Bus Tracker**, An android based tracking application that provides the current status of an active service along with routes and stoppages. Ways are auto extracted. The user can also get notifications of their preferred. It was developed using Android, PHP used for server-side and Google APIs. **Github Link:** <https://github.com/tawsif93/Easy-Bus-Tracker>.

Java, JavaFX, MySQL **Multilingual Text Search**, *This project was used to search files of on a Directory*, Multi lingual Text Search (MTS) is a simple Java application that can be used for faster file searching using stemmed keywords. **Github Link:** <https://github.com/tawsif93/SPL1>.

Professional Experience

07/2021–Present **Assistant Professor**, *Institute of Information and Communication Technology*, Shahjalal University of Science & Technology, Sylhet-3114, Bangladesh.

03/2019–07/2021 **Lecturer**, *Institute of Information and Communication Technology*, Shahjalal University of Science & Technology, Sylhet-3114, Bangladesh.

Courses Taught

Software Design Patterns, Software Testing, Software Requirement Engineering, Data Science, Web Development, Software Metrics, Computer Architecture, Distributed Systems,.

02/2018–02/2019 **Software Engineer**, *Secure Link Services Ltd. (SELISE)*, Dhanmondi, Dhaka.

01/2017–06/2017 **Trainee Software Engineer**, *An IQVIA company*, Mohakhali, Dhaka.

Assigned Project: Audit and Data Analysis Tool

C#, Angular 8+, MongoDB, Couchbase, Native Script, Android An Inspection and Analysis tool for one of the largest European railway companies for tracking down the faults or required renovations on the railway track. The graphical presentation of different railway infrastructures allows them to easily log various issues and assign them to the appropriate team. Both web and Tablet applications were available.

Skills

Machine Learning Frameworks: scikit-learn.

Programming Languages: Java, Python, C, JavaScript, Typescript.

Database Technologies & Frameworks: MongoDB, Redis, Cassandra, SQL, MySQL.

Web Technologies & Frameworks: RESTful API, Micro-services, NodeJS, Angular, ReactJs, Java Spring.

Mobile development: Android, Native Script.

DevOps Tools: Kubernetes, Docker, Jenkins, Bitbucket Pipeline, Github Actions.

Cloud PLaforms: AWS, Google Cloud.

Programming Background

Solved around **400+** problems in online judges like **UVA Online Judge**, **Light OJ** and **Codeforces**.

Academia-Industry Collaboration Experience

Organised seminars and workshops on **Software Testing, Applying Design Pattern, Mobile Development Standards etc.** in cooperation with the local renowned companies

Worked closely with local software companies and **managed sponsorship of around 5000 USD** for the purpose arranging Programming Contests and Software Hackathons.

Managed paid internship opportunities for around **60+** students of my institute in different local software companies.

Extracurricular Activities

Arranged "Fresher's Reception and Farewell 2016", "Annual Picnic 2015"

Organised National High School Programming Competition 2016

Founding executive member of IIT Software Engineer's Community(IITSEC)

Participated in Programming contests like NCPC 2015, SUST IUPC 2015, ICPC Dhaka Regional 2015, 2016.

Participated in Hackathons such as NASA Space Apps Challenge 2016 and National ICT Hackathon 2017.

Player of IIT Cricket Team 2016, 2017

References

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