Junaid Mansur Ifti

https://junaidmifti.github.io Email: bsse1027@iit.du.ac.bd Github: junaidmifti jmifti

EDUCATION

University Of Dhaka, *Bangladesh* 2018 - 2022
Bachelor of Science in Software Engineering
CGPA: 3.58/4.00 (**3.98/4.00** in Last 2 Years)
Notable Courses: Machine Learning, Artificial Intelligence, Software Requirement Engineering, Software Metrics, Software Security, Software Design and Analysis, Software Testing, Software Maintenance, Pattern Recognition and Image Processing, Distributed Systems

PROFESSIONAL EXPERIENCE

Junior Software Engineer, *Ding, Ireland (Hybrid-Remote)* May 2023 – Present

- Relevant Skills: C# (ASP.NET), Jenkins, MSSQL, MongoDB
- Maintain the backend of internal web applications, develop RESTful APIs, conduct API technical specifications, integrate 3rd party payment APIs (REST/SOAP) to Ding's web system, and actively participate in code reviews.
- Collaborate in a multicultural environment, lead technical meetings, and preside over knowledge transfer sessions for technical and non-technical stakeholders.
- Recently started mentoring newly joined SWEs during the on-boarding.

SWE Intern, *Samsung Research & Development Institute, Bangladesh (Onsite)* January 2022 – June 2022

- Relevant Skills: Android Development, Kotlin, Java, JUnit
- Learnt a new domain - Android; language - Kotlin and contributed to the core codebase (100K+ LOC) by improving and increasing unit test case coverage by 40%.

SKILLS

- **Programming:** Python, C#, C++, Java, JavaScript, PHP
- **Frameworks & Technologies:** .NET Core(C#), Flask(Python), pandas, scikit-learn, matplotlib, Bootstrap, CSS3, MongoDB, MSSQL, NUnit, Angular
- **Tools & Platforms:** Jenkins, Git, Docker, Docker-Compose, Jupyter Notebook, XAMPP, Nginx
- **Problem Solving Profile**: **(Leetcode) bsse1027 | Solved Problems: 111 | Max Contest Rating: 1463**

RESEARCH EXPERIENCE

Research Associate, *Intelligent Systems and HCI Research Group,* *Bangladesh* June 2024 – Present

- Working on a research project titled "Automated Community Smell Detection Using In-Context Learning Capabilities of GPT" which aims to automate the detection of collaboration inefficiencies within large-scale software teams.
- Contributing to developing the paper's methodology and designing structured prompts that replicate classical machine learning classification workflows, facilitating zero-shot, one-shot, and few-shot prompting.
- Additionally, participating in the development of the finalized product of this research, a tool to be named "Community Smell Detector."

Undergraduate Researcher, *Distributed Systems & Software Engineering Research Group,* *Bangladesh* 2022

- Developed "GAnomaly", a tool leveraging machine learning and statistical methods to identify anomalous web traffic in Google Analytics data, supervised by Dr. Kazi Muheymin (DSSE Lead). Implemented this web application based on the theory proposed in the IEEE paper "Using Google Analytics to Support Cybersecurity Forensics," utilizing rule-based, statistical outlier detection techniques and ML algorithms.
- Designed the user interface and system flow, contributing to a functional tool to assist cyber-security forensics.
- Project Link: https://github.com/junaidmifti/SPL-3

STANDARDIZED TEST SCORES

IELTS Academic: Listening 8.5 | Speaking 8 | Writing 7.5 | Reading 7.5 | **Overall 8**

PROJECTS

TOOL IMPLEMENTATION & RESEARCH PROJECTS

- GQM Research: Impact of Physical Health and Daily Habits on Developer Productivity | *Project Link* | *(Senior Year)* 2022
Languages/Frameworks: Python, Jupyter Notebook
Investigated the correlation of physical health on developer productivity using the Goal Question Metric (GQM) approach, based on collected data through manually created questionnaires, from software engineers in various companies.

- Air Quality Index predictor based on weather data(LR) | *Project Link* | *(Senior Year)*
Languages/Frameworks: Python, pandas, scikit-learn 2022
Used linear regression to explore the correlation between weather patterns and AQI in Chittagong, Bangladesh. Integrated and pre-processed a custom dataset from two publicly available scraped sources.

- Control Flow Graph and Software Metrics | *Project Link*| *(Senior Year)*
Languages/Frameworks: Python 2022
Developed a tool to generate control flow graphs and compute software metrics, such as Halstead complexity and Lines of Code (LOC), for software quality assessment.

- A Tool for Commit Classification | *Project Link*| *(Senior Year)*
Languages/Frameworks: Python, Jupyter Notebook 2022
Implemented a paper into a tool, based on source code changes and commit messages, categorizing commits into Corrective, Perfective, and Adaptive maintenance activities, as part of a group project.

- Stock Price Prediction (LR) | *Project Link*| *(Senior Year)*
Languages/Frameworks: Python, scikit-learn 2022
Developed a linear regression model to predict stock market trends using historical data, implementing a research paper, in the context of Bangladesh.

AI, ML, AND SOFTWARE DEVELOPMENT PROJECTS

- Divorce Prediction (KNN From Scratch) | *Project Link*| *(Junior Year)*
Languages/Frameworks: Java 2021
Built a K-Nearest Neighbors (KNN) algorithm, coded from scratch, to predict the likelihood of divorce based on a psychological questionnaire dataset.

- Skin Detection (Naive Bayes) | *Project Link*| *(Junior Year)*
Languages/Frameworks: Java 2021
Developed a Naive Bayes classifier from scratch to detect skin pixels from any human image using Bayesian statistics for lightweight image processing.

- Wumpus World: AI Agent | *Project Link*| *(Junior Year)*
Languages/Frameworks: Java, HTML 2021
Designed an AI agent using logical reasoning to solve the Wumpus World problem, helping the agent navigate the environment and try to win using inferential logic.

- Connect 4: AI Player Agent| *(Junior Year)* | *Project Link*
Languages/Frameworks: Python 2021
Developed an AI player for Connect 4 game using the Minimax algorithm with Alpha-Beta Pruning, enabling heuristic evaluation and efficient decision-making in the game, as a group project.

- Ride Sharing App (Monolith to Microservice) | *Project Link*| *(Junior Year)*
Languages/Frameworks: Node.js, Docker, Nginx 2021
Developed a rudimentary ride-sharing app and incrementally converted it from a monolithic architecture to microservices. The app ran on orchestrated containers deployed in distributed computers.

- Postal Automation System | *Project Link*| *(Junior Year)*
Languages/Frameworks: PHP, VanillaJS, Bootstrap, MySQL 2021
An age-old letter delivery system was converted to a digital web app-based system for the University of Dhaka, now live as an officially working web application under the university domain.

- Doctors Management System (MVC) | *Project Link*| *(Junior Year)*
Languages/Frameworks: C#, ASP.NET MVC, AngularJS 2021
Built an MVC-based web application for doctors to manage appointments and patient records and database-managed prescription-making as pdf.

- Software Requirement Specification Project | *Project Link*| *(Sophomore Year)*
Produced a Software Requirement Specification (SRS) document from scratch by having actual client discussions for a proposed software system of a university cafeteria, adhering to industry-standard SRS documentation. 2019

- Pseudo 3D Racing Car | *Project Link*| *(Freshmen Year)*
Languages/Frameworks: C++, SFML 2018
Developed a pseudo-3D racing car game using C++ and SFML, simulating 3D effects in a 2D game engine.

ACCOMPLISHMENTS

National Cyber Drill by BGD e-Gov CIRT | Capture the Flag (CTF) Competition 2020

- Competed among 234 teams from banks, organizations, and universities in a CTF competition of national cyber drill.
- Secured a spot in the Top 20.

Government Scholarship (Science), Higher Secondary Certificate Exam 2017
Government Scholarship (Science), Secondary Certificate Exam 2015
Bangladesh Physics Olympiad by BDPhO | Sylhet Divisional Medalist 2012

- Achieved Divisional Medalist recognition and proceeded to the national round.

INVOLVEMENT

Organizing Secretary & Cultural Secretary, IIT Software Engineers' Community 2019-2022

- Organized various technical workshops, seminars communicating with industry experts and speakers.
- Led technical and operational teams and served on the executive committee for "ITVerse 1.0," the first inter-university IT Fest and Competition by IIT DU.
- Led operational teams having freshers and sophomores in "TechCrunch 2.0," an ADB-funded "IT Awareness Workshop For Female College Students" to promote women's participation in IT.
- Led cultural teams in intra-department musical and cultural programs.

Volunteer, Fight For Life Initiative March-April 2020

- Collaborated with students and alumni of IIT, DU to create a website with an integrated payment system to raise emergency funds for the poverty-stricken people of Bangladesh during the initial Covid-19 lockdown phase.

REFERENCES

Dr. Kazi Muheymin-Us-Sakib, Professor
Institute of Information Technology
University of Dhaka, Bangladesh
Email: sakib@iit.du.ac.bd
Website: https://dsse.github.io/

Dr. B M Mainul Hossain, Professor & Director
Institute of Information Technology
University of Dhaka, Bangladesh
Email: mainul@iit.du.ac.bd

Dr. Ahmedul Kabir, Associate Professor
Institute of Information Technology
University of Dhaka, Bangladesh
Email: kabir@iit.du.ac.bd