Md Mahin Arafat

<u>mahinarafatmeem@gmail.com</u> | 516-618-7416 | New Hyde Park, NY <u>linkedin.com/in/mahin-arafat | github.com/mahin12 | mdmahinarafat.netlify.app</u>

Summary

Agile leader and full-stack developer with a proven track record of building and managing successful web applications. I excel at collaborating with teams to transform ideas into reality, leveraging my expertise in Java, PHP, Laravel, and more to optimize performance and deliver projects on time and within budget. Seeking a challenging role where I can combine my technical prowess and leadership skills to drive impactful results.

Skills

Web Development: HTML5, CSS3, JavaScript, jQuery, PHP, MySQL, Google Analytics

DevOps and Programming: Docker, GitHub, Postgres, Python, React JS, Java, jQuery,

Version Control

Networking: Network simulation, Cisco Packet Tracer, Routing, IP/TCP, Subnetting

Software/Framework/IDE: Microsoft Office Suite, JIRA, Bitbucket, React.JS, Docker, PyCharm,

PhpStorm, Laravel, Bootstrap, Django

Cloud platform and Database: Heroku, Netlify, MySQL, SQLite

Other Tools and Skills: Agile and Scrum Methodology, Data Visualization, Software Architecture and

Modelling

Operating System: Linux, MacOS, Windows, VirtualBox

Interpersonal Skills: Observant, Creative Thinker, Team Oriented, Problem Solving, Excellent

communication

Certificates and Publications

Comptia Security+, Comptia, 2023

Design and Development of a ML-Based Safety-Critical Fire Detection System, Springer Nature Singapore

Experience

Associate Project Lead

Sirius App Messenger | Toronto, ON, Canada Jun 2022 – Sep 2022

- Led the project management efforts for Sirius App Messenger, overseeing the development and debugging of software systems.
- Orchestrated unit testing and Java coding processes, ensuring the adherence to project timelines and quality standards.

- Implemented **Agile methodologies** for continuous integration of software systems, optimizing project efficiency.
- Collaborated seamlessly with internal teams, taking a leadership role to influence the development of a robust and responsive web application.
- Effectively managed project responsibilities, driving success through strategic planning and efficient resource allocation.
- Applied best practices in system design and technical specifications, ensuring alignment with project goals and industry standards.
- Conducted proactive research and development activities, staying abreast of industry trends to inform project decisions and maintain a competitive edge.

Junior Project Manager & Software Engineer

Strativ BD Limited | Dhaka, Bangladesh Feb 2020 – Jan 2022

- Cultivated expertise in web development through hands-on involvement in diverse projects, specializing in troubleshooting software and debugging.
- Independently managed client-based consulting projects, effectively communicating with clients, stakeholders, and internal teams during technical meetings.
- Ensured timely resolution of issues related to organizational change which **expedited the HR process**.
- Developed skills in project management, risk estimation, and continuous improvement, contributing to the overall efficiency of project workflows.
- Led the ERP project from conception to completion, resulting in a significant increase in processing speed and a **15% reduction in system errors**.
- Expanded technical skillset by acquiring familiarity with scripts and technologies such as **PostgreSQL** and **Postman**.
- Achieved **near to 0% database error** rate during the entire ERP project, ensuring data integrity and system reliability.

Software Engineer

Saleduck Asia | Kuala Lumpur, Malaysia Feb 2019 – Jan 2020

- Enhanced system **loading speed 3 times faster**, particularly beneficial in slower internet countries.
- Achieved Google Lighthouse scores consistently exceeding 98%, ensuring optimal website speed, SEO, and accessibility.
- Aced codebase transformation to the MVC pattern, resulting in 30% faster development cycles and significantly improved code maintainability.
- Utilized PHP, Laravel framework, HTML, CSS, and SASS to implement changes that led to these improvements.
- Actively participated in project coordination tasks, providing valuable feedback on project progression.
- Implemented professional product management tools (**Bitbucket**, **Slack**, **Git**, **Docker**) to streamline SDLC processes.

Team Member

Motorola Lab | University of Malaya Feb 2018 – June 2018

- Contributed to collaborative research at Motorola Lab, focusing on sustainable waste management solutions
- Conducted experiments and analysed data to assess the effectiveness of innovative waste remediation processes.
- Worked closely with interdisciplinary teams to integrate research findings into practical applications.
- Presented research outcomes to the team, fostering effective communication and knowledge sharing.
- Gained hands-on experience in laboratory techniques for accurate data collection.
- Played a key role in contributing to the success of the research team at Motorola Lab.

Education

Masters of Electrical and Computer Engineering

Ontario Tech University, Oshawa, Canada January 2022 - May 2023

- Completed coursework in Pervasive & Mobile Computing, S-C Software Systems, and Real-Time Data Analytics IoT.
- Studied Production & Operation Management for process optimization and efficiency enhancement.
- Explored ethical dimensions of IT security in courses such as Trust in A.I., Cybercrime and Law, and Law & Ethics of IT Security and engaged in Network Computing systems.
- Specialized in Cybersecurity, focusing on cutting-edge technologies and strategies for information system safeguarding.

Bachelor of Computer Science (Software Engineering)

University of Malaya, Kuala Lumpur, Malaysia January 2017 - March 2021

- Specialized in Software Engineering with expertise in Requirements, Web Programming, Testing, Process, Quality, Architecture, Maintenance, Component-Based Engineering, Real-Time Systems, and IoT.
- Completed foundational coursework in Computing Mathematics, Programming, Database, Software Modelling, Data Structure and Algorithm Design, System Architecture
- Expanded beyond technical skills with courses in entrepreneurship, information literacy, and social engagement for a well-rounded perspective.
- Acquired project management skills through Co-Curriculum and Project Management courses.
- Graduated with comprehensive knowledge in software engineering, emphasizing requirements and project management.

Notable Projects

- Engineered a cloud-based solution using ChatGPT for 92% accurate security vulnerability detection in 190 programs across nine programming languages.
- Developed a user-friendly web application with **Flask, MongoDB** backend, and deployed on Heroku, incorporating HTML, CSS, and Bootstrap.
- Conducted thorough analysis of threat detection performance across diverse programming languages.
- Explored the impact of code length on threat detection accuracy, achieved 91.57% accuracy.
- Implemented secure user authentication for code-check and user activity tracking.

Real-time Violent Activity Detection and Tracking

- Spearheaded development of an intelligent violent activity detection and tracking mechanism using **Computer Vision (CV)** and Artificial Intelligence (AI).
- **Proposed a novel approach** combining human key-point detection for pose estimation and tracking through the **DeepSORT** method.
- Implemented a supervised algorithm to differentiate between violent and non-violent activities.
- Prepared a labeled dataset from collected videos and achieved a high accuracy of 99.07% with the Random Forest algorithm.
- Implemented real-time detection for video data, projecting the results on a webpage.
- Enhanced security measures in surveillance systems, successfully classifying various suspicious activities.

Safety-Critical Fire Detection System

- Real-time prediction using machine learning and Fire Dynamics Simulator.
- Implemented top-performing algorithms (Gradient Boost, Random Forest) with **0.95 R2 score**.

IT Management Exploration - Cybercrime

- Explored internet's impact on global social infrastructure and business, emphasizing security objectives—confidentiality, integrity, and availability.
- Addressed the growing threat of denial-of-service (DoS) attacks, discussing active attacks with a focus on availability.

Data Visualization and Comprehensive Analysis with Tableau

- Examined "Detecting Heavy Drinking" dataset for patterns in body temperature and TAC levels.
- Utilized smartphone data for human activity recognition and machine learning precision.
- Explored breast cancer data for diagnostic insights, considering counts, correlations, and patterns.
- Analyzed student performance data, correlating academic outcomes with influencing factors.
- Analyzed **MOO dataset** with parallel plotting for optimization insights.

Blockchain-Based Voting System Development

- Built secure & user-centric voting system for trusted & transparent elections.
- Built seamless voting processes, ensuring integrity and voter confidence through Blockchain.
- Integrated robust **Proof of Work (PoW)** for reliability and blockchain inclusion.
- Fortified security with Public Key Cryptography and SHA-256 hashing
- Ensured resilience with a secure and immutable blockchain structure and implemented security measures including confirmation waiting to prevent attacks.

Outdoor Location Detection System

- Crafted a Python and JavaScript system that pinpoints outdoor locations with 92%+ accuracy.
- Ensured seamless integration with geolocation technologies for effortless data utilization.