

Md. Samiul Alam

Portfolio: md-samiul-alam.github.io/portfolio/ | LinkedIn: linkedin.com/in/md-samiul-alam

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TECHNICAL SKILLS SUMMARY

Languages	JavaScript, TypeScript, Python, Java, PHP, C++
Front-end	Angular, React, Tailwind CSS, Material UI, Bootstrap, JQuery, HTML5, CSS3
Back-end	Node.js (Express), Python Django, Fast API, Laravel
Database	SQL: MS SQL Server, PostgreSQL, NO SQL: MongoDB.
Project Management	Jira, Trello Board
Testing Frameworks	Mocha, Jest, Jasmine
DevOps	CI/CD, Docker Container
Cloud Solutions	AWS EC2, S3
Version Control	Git
Leetcode Profile	https://leetcode.com/u/samiul-alam/

WORK EXPERIENCE

• LAKEHEAD APPLIED GEOMATICS RESEARCH LABORATORY

- **Research Assistant** [January 2022 - April 2024]

- Developed a full-stack web application using **Angular** and **Python Django**, integrating a custom machine-learning model for real-time data analysis and predictions as a GIS software solution.
- Built **RESTful APIs** for the backend server running a machine learning model.
- Designed an interactive and responsive user interface with **Tailwind CSS**, allowing users to visualize and interact with **ML model** outputs.
- Deployed the app to **AWS EC2** cloud platform, ensuring availability for end-users.

• ENOSIS SOLUTIONS

- **Senior Software Engineer** [January 2021 - September 2022]

- Achieved 100% of sprint goals by leading **sprint planning**, facilitating retrospectives, and driving continuous improvement in team performance and **agile processes**.
- Presented project progress **reports**, proposed **solutions** to challenges, and fostered transparent communication with clients.
- Enhanced code quality and consistency by implementing **linting tools**, streamlining **code reviews**, and reducing bugs related to **coding standards**.
- Identified and prioritized tasks in the **software development lifecycle (SDLC)** while streamlining project tracking and team collaboration using **Jira**.
- Reduced post-release bugs and bug resolution time by conducting regular **code reviews**, resolving merge conflicts, implementing best practices, and leveraging advanced **debugging** tools to efficiently identify and resolve complex issues.
- Increased the productivity of junior developers through hands-on mentoring, knowledge sharing, workflow guidance, and skill development initiatives.
- **Optimized** complex database queries and stored procedures by implementing indexing, query restructuring, and database normalization, significantly improving API response times and overall application performance.

- **Software Engineer** [October 2018 - December 2020]

- Developed and maintained high-performance **Single Page Applications (SPAs)** using **Angular**, increasing user engagement and optimizing component architecture, state management, & testing practices.
- Improved user satisfaction by resolving cross-browser compatibility issues, enhancing **UI/UX** with **Angular Material** and **Bootstrap**, and ensuring accessibility across all devices.
- Designed the database schema and optimized complex queries using **MSSQL server**, reducing the query execution time.
- Streamlined feature development by creating reusable components, custom modules, directives, pipes, and services, ensuring **scalability** and **maintainability** of the codebase.
- **Deployed** secure and scalable web applications on **AWS EC2**, configuring DNS and SSL certificates and containerized environments with **Docker** for consistent deployment.
- Integrated Okta Authentication API for secure user authentication and authorization in web applications while configuring **OAuth 2.0** and **OpenID Connect (OIDC)** protocols to enable seamless Single Sign-On (SSO) and token-based authentication.

- Reduced the number of production bugs by 25% by performing extensive **unit** and **end-to-end tests** using **Mocha** and **Jasmine**, ensuring high code coverage and identifying and resolving potential issues early in the development cycle, resulting in more stable and reliable applications.
- Developed and integrated secure payment systems using **Stripe**, enabling seamless online transactions, and created comprehensive API documentation with **Swagger** to improve team collaboration.
- Improved system performance by utilizing **MongoDB** within a **microservices** architecture, enhancing scalability, availability, and support for rapid data growth.
- Established **CI/CD** pipelines with **GitLab**, improving deployment time significantly.
- **AHSANULLAH UNIVERSITY OF SCIENCE AND TECHNOLOGY**
- *Competitive Programming Trainer [2017 - 2022]*
 - Conducted regular training sessions to teach advanced data structure and algorithm concepts and problem-solving techniques to the Junior students.
 - Organized weekly practice sessions to simulate contest environments.
 - Curated diverse programming problems, ranging from easy to challenging.
 - Coached participants for inter-university programming contests.

PROJECTS

- **Open Kitchen:** Open Kitchen is a web-based platform developed by Powerhouse Dynamics and Enosis Solutions to enhance energy efficiency, food safety, and operational efficiency in the food service industry. The project aims to reduce energy costs, improve food safety compliance, and streamline operations through real-time data monitoring and analysis.

Project Demo: cutt.ly/le6yuChL

Tools used: Angular, Material UI, High-charts.js, Node JS (Express), MS SQL Server

Contributions: My key contributions included implementing interactive data visualizations using High-charts.js, creating scalable Angular components for the front-end, and developing robust back-end RESTful APIs with secure Okta authentication using Node.js and Express. Optimized complex SQL queries to resolve bottleneck issues in REST APIs.

- **V-Alert:** V-Alert is a mobile app for rapid emergency notifications, enabling organizations to quickly send critical information to individuals via unlimited messaging and channels, with features like geofencing and system integration.

Project Demo: cutt.ly/Pe6yuMtA

Tools used: Node JS (Express), MongoDB, CircleCI, Docker, Websocket.

Contributions: Contributed to the project by developing the backend API using Node.js, Express, and MongoDB, implementing CRUD operations for efficient database management. Ensured smooth and automated deployments by integrating CI/CD pipelines. Improved application consistency and scalability by containerizing microservices with Docker. Enhanced user experience by implementing WebSocket functionality, enabling real-time, low-latency messaging within the application.

ACHIEVEMENTS & AWARDS

<i>Champion</i>	Intra AUST Programming Contest Spring 2017.
<i>Champion</i>	Intra AUST Programming Contest Spring 2016.
<i>2nd Place</i>	Intra AUST Programming Contest Spring 2015.

CERTIFICATIONS

- Cert Prep: Scrum Master | cutt.ly/Oe6yyYVl
- Angular: Creating and Hosting a Full-Stack Site | cutt.ly/Ke6yrptt
- Building Modern Projects with React | cutt.ly/be6ytFMq

EDUCATION

- **Master of Environmental Studies (Thesis) [January 2022 - May 2024]**
Dept. of Geography and the Environment, Lakehead University, Thunder Bay, ON, Canada
- **B.Sc in Computer Science & Engineering [September 2014 - December 2018]**
Ahsanullah University of Science and Technology, Dhaka, Bangladesh