

MD SAIFUL ISLAM

Senior Software Engineer, Therap (BD) Ltd.

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Education

University of Dhaka

2013 – 2017

Bachelor of Science in Computer Science and Engineering

Dhaka, Bangladesh

CGPA: 3.29 out of 4.00

Thesis Topic: A Real-Time System For Optical Character Recognition Of Bengali Digits

Summary: All previous OCR works on Bengali characters lacked the speed required to use them in real-time scenarios like instant license plate detection from a moving car. In this thesis, we have proposed a system that can recognize Bengali digits from a video feed in real-time using SVM and k-NN classifier. We have used two distinct feature extraction methods - pixel matrix and histogram of oriented gradients (HOG) and analyzed their relative performance in different situations.

Experience

Therap (BD) Ltd.

April 2017 – Present

Senior Software Engineer (April 2022 - Present)

- Manage 5 developers and guide them to solve system design and data structure related problems
- R&D new health informatics and interoperability standards to implement them in therap system
- R&D performance optimization and stability enhancement of therap's batch applications
- R&D automatic secure data capture from IoT devices and design HIPAA compliant services
- Coordinate with various teams to improve core system infrastructure and application security
- Review source code and test cases for upcoming releases
- Conduct recruitment interviews to hire new developers

Software Engineer II (April 2020 - April 2022)

- Designed a system to generate therap's new responsive dashboard from distributed configuration files
- Designed and developed therap's Health Screening module
- R&D potential improvement of therap's Health Tracking Suite

Software Engineer (April 2018 - April 2020)

- Redesigned therap's Health Information Exchange System
- Reviewed code from different projects inside and outside the team

Associate Software Engineer (April 2017 - April 2018)

- Worked on therap's Health Tracking Suite redesign
- Migrated a few legacy modules to new UI and updated tech stack

Test Score

GRE: 316 (Quantitative: 161, Verbal: 155, Analytical Writing: 3)

IELTS: 7.5 (Reading 7.5, Listening 7.5, Speaking 7.5, Writing 6.5)

Technical Skills

Languages: Java, Python, JavaScript, TypeScript, Scala, Kotlin, C++

Scientific Computing: Matlab, Numpy, Scipy, Pandas

Frameworks and Libraries: Spring MVC, Spring Boot, JPA, Java EE, Django, Flask, React Js, JQuery

Architecture: Microservices, Monolithic, Serverless

Tools: Git, Docker, Linux (and other Unix Like OS)

Projects

Therap Connect

January 2023

Therap Connect is a new initiative inside Therap Services which explores automatic data capture from popular IoT devices and aggregates them in therap system. I am developing HIPAA compliant services from this data to help individuals with intellectual and developmental disabilities.

Therap External Data Feed (ExDF)

April 2022

Therap lets its users automatically export data from different modules at regular intervals. I designed a robust fault-tolerant system to export large volumes of data and transport them securely to the appropriate recipients. The system automatically adapts its exporting algorithm and query strategy based on the approximate number of rows.

Therap Dashboard

April 2021

The dashboard is the homepage for therap users and the gateway to all other modules in therap. I designed a dynamic system to feed data into therap dashboard from distributed configuration files replacing the old static pages. I developed a domain specific syntax for creating configuration files using Java and a testing framework based on Apache HttpClient to meet the unique testing challenges of therap dashboard.

Therap Health Screening Module

January 2020

The Health Screening module is a part of the therap's health informatics module suite. I designed a system to recommend, record, and report health screenings based on the Adult Screening Recommendations of the Massachusetts Department of Developmental Services.

Therap Health Information Exchange (HIE) System

January 2018

Therap HIE system exchanges data with several HIEs following hl7 standards through therap's SFTP channels. I redesigned the system and added new features, performance improvement, fault tolerance, etc.

Online Doctor-Patient Communication System

February 2015

Designed a platform for effective communication between doctors and patients by combining the healthcare management system and social media features. It was an assignment to design a large-scale SAAS application as part of the software design pattern lab course in undergrad.

Extracurricular/Volunteer Experience

E-Boipotro [↗](#)

2016 – Present

Co-founder

- Created an open-source epub library for public domain Bengali books
- Converted all books of Nobel laureate Rabindranath Tagore into epub format
- Organized crowdsourcing event of typing old Bengali books and converting them to epub

Bangla Tech Talk Podcast [↗](#)

2020 – Present

Host

- Hosted a popular tech podcast in Bengali Language (available on most podcast platforms [↗](#))
- Created and open-sourced a static website for publishing podcasts ([🔊](#))

Java User Group Bangladesh (JUGBD) [↗](#)

2021

Website Designer and Content Reviewer

- Designed and developed the first official website of JUGBD (archive [↗](#))
- Worked as a reviewer of java related articles

CSEDU Students' Club

2013 – 2016

Volunteer

- Arranged various cultural events like Bengali New Year, Pahela Falgun, etc. (behind the scenes [↗](#))
- Distributed winter clothes among the deprived people of two Upazilas of Panchagardh (event [↗](#))

University of Dhaka

2013 – 2015

Class Representative

- Worked as a liaison between students and course instructors
- Represented my class in discussions related to the welfare of the students