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## SKILLS

### </> Programming Languages

C# TypeScript JavaScript

Java Python

### 🗄 Databases

MS SQL Server Oracle MySQL

SQLite Redis

### 🌐 Web-development

#### 📋 Back-end: ASP.NET

Serenity.is Node.js

#### 📁 Front-end: HTML CSS jQuery

Bootstrap.css Chart.js Babylon.js

Angular.js Vue.js React.js Blazor

### 💻 Desktop-development

WinForms WPF Electron.js

### 📱 Mobile-development

Xamarin

### 🧪 Testing-frameworks

NUnit / xUnit / MSTest SpecFlow

Selenium

### ⇄ ORMs

Dapper Entity Framework

### ☐ Others

Git OpenCV WebGL

Tesseract OCR Swagger

Jupyter Notebook

### 🗣 Communication Languages

- Bengali — Native
- English — Professional

## AWARDS

Performance Award

—TechnoVista Limited 📅 2017

# DEOWAN FARUQUE AHAMED

Senior Software Engineer | Full-stack .NET Developer

## 🗨 PROFILE

Strong planner and problem solver who readily adapts to change, works independently, and exceeds expectations. Begins programming in school life and dreams to become a Software Engineer.

- 9+ years of professional software development experience
- 17+ years of programming experience
- Knowledge of Object Oriented Programming (**OOP**)
- Follows software design principles **SOLID**, **DRY**, and **KISS**
- Strictly maintains coding conventions to write **clean code** and **maintainable software**
- Good skills in analyzing requirements, designing, coding, and testing
- Experience in **database design**, and **performance tuning**
- Knowledge in preventing various **web security** threats and attacks such as XSRF/CSRF, XSS, SQL Injection, DDoS attacks, etc.
- Experienced in **RESTful API** and **JWT**
- Knowledge of **image processing** and **computer vision**
- Experience in **data extraction** and **transformation** from **Image**, **PDF**, and **Excel** files
- Ability to jump into any problem and able to develop “**outside the box**” solutions
- Contributes to open-source projects. Notably Serenity platform

## 📁 EXPERIENCE 9+ YEARS

### Senior Software Engineer

📅 2018 - Present

TechnoVista Limited, Dhaka

- Working closely with project managers and clients.
- Collecting client requirements and converting them to technical solutions.
- As a project development lead, help juniors understand and perform their tasks.

### Software Engineer

📅 2016 - 2017

TechnoVista Limited, Dhaka

- Worked closely with senior software engineers and analysts.
- Understood business and developed accordingly.
- Got a performance award!

### Software Developer

📅 2014 - 2015

Unisoft Systems Limited, Dhaka

- Worked as a development team member of an ERP system.
- Understood business from analysts and developed accordingly.

## 🎓 EDUCATION

### Masters in Computer Science and Engineering (CSE)

📅 2021 - Present

University of Information Technology and Sciences (UITS), Dhaka

Running

### Bachelor in Computer Science and Engineering (CSE)

📅 2010 - 2014

University of Information Technology and Sciences (UITS), Dhaka

CGPA 3.67 (Out of Scale 4) — Got scholarships in several semesters

### Higher Secondary Certificate (H.S.C)

📅 2008 - 2010

Porsha Degree College, Porsha, Naogaon

GPA 3.50 (Out of Scale 5)

### Secondary School Certificate (S.S.C)

📅 2005 - 2007

Sapahar Pilot High School, Sapahar, Naogaon

GPA 3.86 (Out of Scale 5)

## PROJECTS

### 1. Integrated Centralized Billing System for Palli Bidyut Samities

 Mar 2019 - Present

A large-scale billing system. Over 2000 employees from over 500 workspaces will be using the system daily from all over the country. Over 30 million electricity bills will be processed per month by this system. Modules for this system are Electricity Meter Reading by Image Capturing, New Connection Application, Consumer Management, Billing, Collection, and Accounting management system.

#### Challenges:

- Initially, the software was developed using the MS SQL server database. But later, the client chooses to use the oracle database. So, a large-scale database migration task is performed. Now the system is working fine with both databases.
- The software was developed using .NET Framework 4.x. But later, we migrated to .NET 6
- Since it is a financial system, network security is the priority. So, different network zones (VPN, DMZ) are used for modules. The data synchronization between zones was a challenge.
- Almost all banks in Bangladesh are connected to this system via VPN. We have to support them in implementing our bill payment API
- There are legacy data with different shapes for each workspace. We have to migrate them into our system.

**Role:** Solution Architect & Development Lead

**Languages:** C#, TypeScript

**Tech-Stack:** ASP.NET Core MVC, Serenity.is, Dapper, SlikGrid, OpenCV, Chart.js

**Databases:** Oracle, Redis

#### Responsibilities:

- Involved since the project initialization.
- Collecting requirements and visiting client premises in several locations.
- Involved in writing Software Requirement Specification (SRS).
- Designed databases and corresponding user interfaces.
- Write back-end and front-end validation and business logic.
- Architecting the solution using the Serenity platform.
- Write unit test cases for critical business rules.
- Performed research and development (R&D) for electricity meter readings by capturing meter images. R&D task performed using python and Jupyter Notebook. Later, it converted to java for integration with the android app.
- Implemented two-factor authentication.
- Implemented distributed caching using Redis.
- Deployed the system to the client's data center (about 20 servers) as a distributed system.
- Developed a server management tool to deploy the published application files to the servers using SSH and SCP.

### 2. Port Automation System

 Jul 2016 - Mar 2018

This is a complete sea-port automation system used at Mongla Port. Modules for this system are Container Yard, Transit Shed, and Port Billing, etc. Integration with ASYCUDA through IGM.

#### Challenges:

- The port business is a new domain for us. We have to study a lot to understand the requirements.
- Visual representation of the port yard and locating the cargo inside the port was a challenge.
- The users did not have much IT knowledge to operate the system. So, implementation was another challenge.

**Role:** Analyst & Development Lead

**Languages:** C#, TypeScript

**Tech-Stack:** ASP.NET MVC, Serenity.is, Dapper, SlikGrid, Vue.js, WebGL, Babylon.js, Chart.js

**Databases:** SQL Server

#### Responsibilities:

- Designed and develop the end-to-end solution to the requirements.
- Developed the visual representation of the port yard using the WebGL library (babylon.js).
- Integrated google maps to locate incoming and outgoing vessels.
- Import General Manifest (IGM) XML file importing facility.

### 3. E-Licensing System

 Jul 2017 - Feb 2018

Online licensing and approval system for any business entities of Power/Gas/Petroleum Production, Transition, or Distribution Companies

**URL:** <http://elicense.berc.org.bd/>

**Role:** Analyst & Development Lead

**Languages:** C#, TypeScript

**Tech-Stack:** ASP.NET MVC, Serenity.is, Vuejs, Chart.js

**Databases:** SQL Server

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## 4. IATI Import Module

📅 Jan 2016 - Jun 2016

This project integrates AIMS Bangladesh with IATI where Development partners publish their data on aid activities through the International Aid Transparency Initiative (IATI). This project's aim is to start using IATI data in Bangladesh's Aid Information Management System (AIMS) and improve the quality of the data held in the AIMS and reduce the burden of data collection.

**URL:** <http://aims.erd.gov.bd/IATIImportSite>

**Role:** Developer  
**Languages:** C#, TypeScript  
**Tech-Stack:** ASP.NET MVC, Entity Framework, AngularJs  
**Databases:** SQL Server, RavenDB

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## 5. Security (User Management) Module

📅 Mar 2016 - Jun 2016

This is a cross-database, single-sign-on (SSO) user management module which can be integrated with any project

**Role:** Main Developer  
**Languages:** C#, TypeScript  
**Tech-Stack:** ASP.NET MVC, Serenity.is, Vuejs  
**Databases:** Cross Database (SQL Server/Oracle/MySQL etc.)

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## 6. Warehouse and Inventory Management System (WIMS)

📅 Jan 2016 - Jun 2016

Enhancing WIMS by adding new features like: Automatic item re-order and requisition system, item issue trend analysis; Real-time integration WIMS-LMS (Loyalty Management System) a gift distribution system of Banglalink through WCF service

**Role:** Developer  
**Languages:** C#, JavaScript  
**Tech-Stack:** ASP.NET Web Forms, WCF  
**Databases:** Oracle

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## 7. UniERP Business Solutions

📅 Nov 2014 - Dec 2015

A solution to all business needs including Finances, Human resources, Manufacturing, Supply chain and etc.

**Role:** Main Developer  
**Languages:** C#, JavaScript  
**Tech-Stack:** ASP.NET WebForms, Entity Framework, Crystal Reports  
**Databases:** SQL Server/Oracle

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## 8. Restricted Logon System

📅 Aug 2013 - Nov 2014

Security software that can restrict employees to do unauthorized access of apps and websites, monitor employees' activity and send screenshots to the server, remotely change the employees' privileges. It also provides file sharing and chatting facility.

**Role:** Analyst & Development Lead  
**Languages:** C#  
**Tech-Stack:** .NET Framework, WinForms and WPF  
**Databases:** My SQL

**Features:** The features are applicable to a specific user or group of users.

- **Block Applications**– Users can run only those apps that are assigned to them and all others apps are blocked. So they cannot waste their office time by playing games or watching movies.
- **Block websites**– This feature helps you to block the specific websites that are used to pass time such as Facebook and Twitter etc.
- **Prevent access to specific hard disk drives**– Users can only access those disk drives that are assigned to them. If a user has only d: and f: drives then he can only access these drives.
- **Restrict from using USB drive/Pen drive/CD-DVD drive**– USB drives are used to transfer files from one PC to another PC. Prevent using these drives; you can save valuable data/files.
- **Automatically capture screenshots and send them to the server**– this software capture screenshots of the specific apps at a specific interval and send them to the server. You can see these screenshots whenever you want.
- **File transferring/sharing**– it is easy to transfer files using this software, you have to select a file. The file is automatically uploaded to the server and at the receiver's PC, it is automatically downloaded.
- **Chatting**– The users can send messages instantly. Supports private and public chat.
- **Protects from viruses**– Since this software blocks all unnecessary apps including viruses, so you do not need an antivirus.

## HOBBY PROJECTS

Since my school life, I have developed some applications with my own interest. Here are some notable mentions.

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### 1. English to Bangla Machine Translator


 Jan 2012 - Jan 2014

A rule-based English to Bangla machine translator. It's like a poor man's google translator.

**Technologies:** .Net Framework 3.5, C#, MS SQL Server

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### 2. Quran Study Tool


 Jan 2012 - Dec 2012

This tool can be used to read, listen, and search the Holy Quran in different languages (Arabic, Bengali, English).

**Technologies:** .Net Framework 3.5, C#, Access Database, HTML, CSS, JavaScript, and Web Browser control

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### 3. Santali Keyboard Layout

 Jan 2012 - Dec 2012

Using this tool one can type Santali (Santali is a language).

**Technologies:** .Net Framework 3.0, C#, Windows API

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### 4. English, Bengali Dictionary


 Jan 2011 - Dec 2011

Using this tool one can search for the meaning of English and Bengali words.

**Technologies:** .Net Framework 3.0, C#, MS Access Database

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### 5. Virus (clever 9) and Antivirus


 Jan 2009 - Dec 2009

This program is able to spread out from PC to PC via a USB disk and delete your files without your awareness. It can disable windows task manager, registry editor, group policy, etc. To prevent this virus from attacking antivirus software has also been developed.

**Technologies:** Visual Basic 6

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### 6. USB Disk Cleaner


 Jan 2008 - Dec 2009

This prevents executables (viruses etc.) to spread from USB Disk.

**Technologies:** Visual Basic 6

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### 7. Bangla & English Speed Type

 Jan 2008 - Dec 2009

This helps people to increase their Bangla and English typing speed.

**Technologies:** Visual Basic 6

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### 8. PC Cleaner

 Jan 2007 - Dec 2009

Clean up the temporary files that are no longer needed.

**Technologies:** Visual Basic 6



## 1. Serenity Platform

Serenity is an ASP.NET Core / TypeScript application platform designed to simplify and shorten the development of data-centric business applications with a service-based architecture. It aims to make development easier while reducing maintenance costs by avoiding boiler-plate code, reducing the time spent on repetitive tasks and applying best software design practices.

**Repository:** <https://github.com/serenity-is/Serenity>

**Website:** <https://serenity.is>

**Contributions:**

- Added support for the oracle database
- Enhanced code generation
- Added method overloads for Sql `Sum`, `Avg`, `Min`, `Max` etc. which takes `IField` as parameter
- AutoParam consistent after cloning `SqlQuery`
- Added `ForJson` `SqlQuery` method similar to `ForXml` method
- Handled tabs with empty captions in the generated form
- Added `SelectedItem` getter in `Select2Editor`
- Tab title localization in forms
- Added Bengali localization
- Giving a hint to fix the "Specified cast is not valid." exception
- Some minor changes such as look and feel, small bug fixes

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## 2. Fluent Migrator

Fluent Migrator is a migration framework for .NET. Migrations are a structured way to alter your database schema and are an alternative to creating lots of sql scripts that have to be run manually by every developer involved. Migrations solve the problem of evolving a database schema for multiple databases (for example, the developer's local database, the test database and the production database). Database schema changes are described in classes written in C# that can be checked into a version control system.

**Repository:** <https://github.com/fluentmigrator/fluentmigrator>

**Website:** <https://fluentmigrator.github.io>

**Contributions:**

- Oracle 12C supports object name max length = 128

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## 3. Open CV Playground

A playground app for testing algorithms in OpenCV

**Repository:** <https://github.com/rexcardan/OpenCVPlayground>

**Contributions:**

- Updated OpenCvSharp to 4.4.0

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## 4. Serenity.Extra

It has some extra features on top of the Serenity Platform, such as audit logging, theming, reporting, grid data inline editing, and some usefull utilities.

**Nuget:** <https://www.nuget.org/packages/Serenity.Extra>

**Repository:** <https://github.com/dfaruque/Serenity.Extra>

**Contributions:**

- This repository and nuget package are being maintained by me