MD FOURKANUL ISLAM

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Education

M.S. in Information Systems, University of Maryland, Baltimore County **Jan 2022 - Current**

B.S in Computer Science & Engineering, MIST, Dhaka, Bangladesh **Jan 2016 - Dec 2019**

- Major in Computer Science and Engineering, CGPA : 3.54

Skills

- Python | C# | .NET | Java | C++ | C | React Native | MySQL | NoSQL | SQLite | Git | Frontend | Backend
- Android SDK | Unity 3D | GIS | Lambda | OOP | Linux | Game Development | Scikit Learn | Arduino | Full-Stack

EXPERIENCE.

Graduate Research Assistant | University of Maryland, Baltimore County **Feb 22 – Aug 22**

- Developed a cross-platform mobile application using react native and connected the app to the **ASP.NET Core Web API** on a **Linux server** using **Retrofit** and **RESTful API**.
- Developed a background service to collect motion sensor data in the background and sync data to the server.
- Deployed a time series annotation tool using **python Flask server** and applied deep learning algorithm in the backend.

Software Engineer | Army War-Game Center, Dhaka, Bangladesh **Jan 2020 – Jun 2021**

- Developed a desktop application to render geospatial data using **.NET** custom **WinForms control** and graphic overlay.
- Developed simulation game mission system following **Adapter**, **Singleton**, and **Factory** design patterns.
- Contributed to design and development of different features of the multiplayer simulation system application and maintained the existing code base using the latest technologies of **C#, .NET, .NET Entity Framework, ASP.NET, MongoDB**.

PROJECTS

MyPath - [React Native, Python, MongoDB] [Link]

- Developed a React Native based Cross-platform mobile application to collect user location and motion sensors data in the background from the users and sync the collected data with the **ASP .NET Core Web** server using **REST API**.
- Used supervised/semi-supervised learning using python **Pandas, NumPy, Scikit-learn** libraries to identify surface characteristics using motion sensors data.

Android Keyboard Application - [Java, SQLite] [Link]

- Developed a custom android keyboard application for Bangla, English, and Emoji layout using **java** and **Android SDK**.
- Implemented word suggestion system based on the user's input using **java** and **SQLite** database.

IoT Based Gaming Application - [Arduino, Android SDK, RFID, Bluetooth] [Link]

- Developed a Bluetooth connected physical device with **Arduino** and piezoelectric sensors for special (autistic) children.
- Implemented a progress tracking app and sync the app data to the google **cloud platform (firebase)** using **java**.

Recursion Sim - [C#, Unity 3D] [Link]

- Developed a desktop simulation game to simulate various types of recursion and recursion steps using color blocks.
- Implemented in-game data log, scoring, and reward system using **SQL** and **C#.**

Publications

- Towards Developing an IoT Based Application for Improving Cognitive Skills of Autistic Kids [ACIIDS 20].
- Design and Development of a Gaming Application for Learning Recursive Programming [IJCACI 20].

Others

- **Innovative Project Award (2nd Runner up)** at BASIS **Soft Expo 2020.**
- **Best Undergraduate Project Award** at Military Institute of Science & Technology (ECE Faculty 2019).
- **Volunteer**: Project CANSAT - Technical Team Member (Bangladesh Innovation Forum).