SABRINA MAMTAZ NOURIN

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EDUCATION

Masters of Science | *Information Systems*　　　　　　　　　　Jan. 2020 – Aug. 2022
University of Maryland, Baltimore County　　　　　　　　　　　　　Baltimore, Maryland

Bachelor of Science | *Computer Science and Engineering*　　　　Jul. 2014 – Oct. 2018
Bangladesh University of Engineering and Technology　　　　　　　Dhaka, Bangladesh

WORK EXPERIENCE

Software Development Engineer　　　　　　　　　　　　　Sep. 2022 – current
Amazon.com, Inc.　　　　　　　　　　　　　　　　　　　　　　　　Herndon, VA
- Improving developers and customer experience at AWS by working on agile, cost reducing and performance increasing features

Software Engineering Intern　　　　　　　　　　　　　　May 2022 – Aug.2022
Quadric (www.quadric.io)　　　　　　　　　　　　　　　　　　　Burlingame, CA
- Developed an advanced static memory allocation algorithm for compiler using TVM
- Worked on graph visualization to visualize and analyze the performance of latency hiding algorithm

Research Fellow　　　　　　　　　　　　　　　　　　　Dec. 2020 – Jun. 2021
BWTech@UMBC Research and Technology Park
- Worked on research and development of software security assessment product
- Analyzed market, competitors and possible funding opportunities for the developed product

Graduate Research assistant　　　　　　　　　　　　　　Jan. 2020 – May 2022
University of Maryland, Baltimore County　　　　　　　　　　　　　Baltimore, MD
- Research and development of cyber security, anonymization and intrusion detection product using Machine learning and Natural Language Processing

Junior Software Engineer　　　　　　　　　　　　　　　Nov. 2018 – Jun.2019
Cramstack Limited (www.cramstack.com)　　　　　　　　　　　　Dhaka, Bangladesh
- I worked as a backend developer at Cramstack. My primary responsibility was to manage queries in database as per inputs from the frontend.
- Handled RestAPI for integrating frontend and backend.

PUBLICATION

A Self-Adaptive and Secure Approach to Share Network Trace Data
Digital Threats: Research and Practice 2023

Measuring Software Security Using Improved CWE Base Scores
3rd International Workshop on Privacy, Security, and Trust in Computational Intelligence (PSTCI2021)

FULL-STACK SOFTWARE DEVELOPMENT PROJECTS

OvLove (Ovarian healthcare for women)
Implemented using Python, SQLlite and Django framework, HTML and CSS.

Movie Success Predictor
using Machine Learning and Python(Django Framework).

Online Academic Test System
using Java and SQL.

Online Library Management
Implemented using Java, HTML and Oracle SQL.

Games and others

Four in a Row Game
using C, openGL and Artificial Intelligence.

Stick Hero game
Desktop game, implemented using C and OpenGL.

Tic tac toe game
 using Assembly language.

Basic C Compiler

Data Science and Machine learning projects

Detecting the Manufacturer of Shoulders Prosthetics using Deep Learning Techniques
using multiple deep learning methods and transfer learning on *shoulder x-ray* dataset.

Attention Based Sentiment Analysis
using Pytorch for deep learning methods (BERT) on *Twitter*, *Restaurant* and *Laptop* dataset.

Wildfire detection and prediction with deep learning
using CNN on digital image to detect wildfire, and RNN on *MODIS C6* active fire data repository to predict wildfire.

Predicting Hepatitis C Virus (HCV) using Machine Learning Model
using WEKA for different supervised and unsupervised machine learning models and evaluation methods, on *HCV* dataset.

Comparing usefulness of smart phone health apps
using WEKA for creating and testing models, on self collected health app data from smartphones.

Skills

Machine learning: Natural Language Processing, Statistical models, Deep Neural Network.
Programming Languages: Python, Java, R, C++, C, Assembly.
Operating Systems: Windows, Unix.
Framework: Django, Flask, Bootstrap, CSS.
Others: TVM, AWS, Git, Database, WEKA, Rest API, Docker, Android Studio.

Honors and Awards

Peoples Choice award in 1st Gears Ideathon at UMBC   2021

Special award for individual performance in Facebook Developer Circle Women Workathon 2018.
Best individual performer based on a day long workathon on real life technical innivation and marketing problem.

Top 25 in Girls in ICT Programming Contest   2017

Top 20 in National Girls Programming Contest.   2016, 2017

Bangladesh Mathematical Olympiad.   2005,2009,2010,2011