

EDUCATION

- **BRAC University** Dhaka, Bangladesh
Bachelor of Science in Computer Science Jan 2012 - Aug 2016
 - **CGPA:** 3.75/4.00 (Dean's List).
 - **Recipient:** Merit Based Scholarship for the duration of the entire program.
- **Udacity** Dhaka, Bangladesh
Machine Learning Engineer Nanodegree Nov 2019 - Feb 2020
 - **Capstone Project:** Implemented a LSTM model with 1D Convolution layers to detect Activities of Daily Living also known as Human Activity Recognition (HAR) using the WISDM accelerometer and gyroscope dataset. HAR has tremendous application in the Intellectual and Developmental Disability (ID/D) space where detecting human behavior can save lives. This nanodegree was sponsored by my employer and resulted in two contracts being signed, one with Garmin and the other with Oracle Cloud Infrastructure (OCI).

WORK EXPERIENCE

- **Therap (BD) Ltd.** Dhaka, Bangladesh
Software Engineer II, Machine Learning Oct 2019 - Present
 - **Responsibilities:**
 - * Initiated and helped establish the creation of a Machine Learning team. This allowed us to serve our customers in profound new ways whilst keeping ahead of the competition by widening our product portfolio.
 - * Implemented a fall detection system building on top of the work done on HAR. It is in the process of being deployed at scale since it is projected to reduce injurious incident reports by 3x.
 - * Implemented an object detection system which detects sharp and blunt objects among other items. This system has the potential to prevent patients from inflicting harm to others and to themselves. It was crucial in getting agencies to develop trust and share their data with us which was a major bottleneck right from the beginning.
 - * Implemented a face recognition system which can identify and flag unauthorized individuals. This strengthened existing security systems substantially.
 - **Related Technologies:** Python, Numpy, Pandas, Matplotlib, Seaborn, Scikit-Learn, Keras, TensorFlow, PyTorch, Amazon SageMaker, Google Cloud AI Platform, OCI Data Science.
- **Therap (BD) Ltd.** Dhaka, Bangladesh
Software Engineer, Full Stack Web Development Oct 2016 - Sep 2019
 - **Responsibilities:**
 - * Implemented numerous application modules from scratch, writing the backend, frontend, and database schema. These modules made us more competitive in terms of the number of features we offered allowing us to secure multiple State Contracts.
 - * Reimplemented numerous older modules making them more performant, resilient and secure. This optimization improved server response time by 2x making pages load faster and more responsive.
 - * Implemented a multi-select drop-down JQuery widget (one of many) with application specific customizations. The widget improved existing code greatly in terms of extensibility and functionality. Its ease of use and clarity in design led to widespread adoption internally by other software development teams.
 - **Related Technologies:** Java, Spring MVC, Hibernate ORM, PL/SQL, JavaScript, HTML, CSS, Gradle, Bash, IntelliJ IDEA, Oracle Database, Oracle Weblogic Server.
- **We Are X** Dhaka, Bangladesh
Machine Learning Consultant (Contractual, Remote) Jan 2019 - Mar 2019
 - **Responsibilities:**
 - * We Are X was unable to scale to growing demand for its customer service business. To that end, I implemented a text classification machine learning model that can accurately classify customer queries written in Bengali and English. This improved existing customer service representative productivity by 3x allowing We Are X to meet market demand, keeping existing infrastructure intact.

- **BRAC University**
Teaching Assistant (Part Time)

Dhaka, Bangladesh
Jan 2014 - Aug 2016

- **Data Structures and Discrete Mathematics:**
 - * Graded quizzes.
 - * Provided one-to-one consultations and exam room invigilation.

CERTIFICATES

- **Machine Learning with TensorFlow on Google Cloud Platform Specialization**
Google Cloud Authorized Online Training
 - **End-to-End Machine Learning with TensorFlow on GCP by Google Cloud on Coursera.** Certificate earned at **Saturday, January 12, 2019 4:58 AM GMT**: [Link to Certificate](#).
 - **Intro to TensorFlow by Google Cloud on Coursera.** Certificate earned at **Thursday, January 3, 2019 5:01 PM GMT**: [Link to Certificate](#).
- **Deep Learning Specialization**
Online Courses Taught by Professor Andrew Ng of Stanford University *Dec 2016 - Mar 2017*
 - **Deep Learning, a 5-course specialization by deeplearning.ai on Coursera.** Specialization Certificate earned on **April 9, 2018**: [Link to Certificate](#).
 - **Sequence Models by deeplearning.ai on Coursera.** Certificate earned at **Monday, April 9, 2018 1:34 AM GMT**: [Link to Certificate](#).
 - **Convolutional Neural Networks by deeplearning.ai on Coursera.** Certificate earned at **Saturday, March 10, 2018 4:36 PM GMT**: [Link to Certificate](#).
 - **Structuring Machine Learning Projects by deeplearning.ai on Coursera.** Certificate earned at **Monday, January 22, 2018 12:32 PM GMT**: [Link to Certificate](#).
 - **Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization by deeplearning.ai on Coursera.** Certificate earned at **Wednesday, January 17, 2018 5:16 PM GMT**: [Link to Certificate](#).
 - **Neural Networks and Deep Learning by deeplearning.ai on Coursera.** Certificate earned at **Friday, January 12, 2018 5:45 AM GMT**: [Link to Certificate](#).

HOBBIES AND INTERESTS

- **Things that make me, me!**
When I'm not hacking away at code or ripping my hair off because of it, these are what you will most likely find me doing
 - **Music:** Playing a tune on my guitar is one of my most desired and uplifting activities. It always puts a smile on my face and gives me the energy to go take another crack at that pesky little bug.
 - **Yoga:** Ever since I've been introduced to the art and science of Kriya Yoga my life has changed by order of magnitudes. It gives me profound clarity of thought and mind, and guides me in ways I can't explain. I highly recommend you try it out for yourself. You can thank me later.
 - **Reading:** I read a lot. Like really, a lot. From books, articles, blogs, to technical documentation, a large part of my day is centered on reading. Reading materials especially books open up a brand new world for me everytime I submerge myself in one. Two of my all-time favorites and must read for everyone on earth are: *The Sapiens*, and *The Selfish Gene*.
 - **Talking to Mou:** It may sound odd but Mou is my girlfriend and I really enjoy talking to her. Whenever I am feeling low and need a quick pick-up, her soothing words and encouragement always takes the edge off.