

EDUCATION

- **BRAC University** Dhaka, Bangladesh
Bachelor of Science in Computer Science Jan 2012 – Aug 2016
 - **CGPA:** 3.75/4.00.
 - **Recipient:** Merit Based Scholarship for the duration of the entire program.

EXPERIENCE

- **Therap (BD) Ltd.** Dhaka, Bangladesh
Software Engineer, System Architecture Team Oct 2016 - Present
 - **About:**
 - * Therap (BD) Ltd. is a fully owned subsidiary of Therap Services LLC, USA.
 - * Therap is an online documentation, reporting and communication software suite for agencies supporting individuals with Intellectual and Developmental Disabilities (I/DD).
 - **Core Responsibilities:**
 - * Experience developing and maintaining large-scale Java EE, SaaS applications.
 - * Strong understanding of Object Oriented Programming, Design Patterns, Data Structures, and Algorithms.
 - * Thorough understanding of RDBMS (Relational Database Management System) and a demonstrated ability in database design using SQL.
 - * Extensive experience working with Oracle WebLogic Server, Oracle Database and other Oracle Enterprise tools.
 - * Practitioner of Agile software development methodologies and Test Driven Development.
 - * Experience with Version Control Systems such as Git, Github, and Bitbucket.
 - * Experience with dependency management and build systems such as Ant, Maven, and Gradle.
 - * Comfort with front-end technologies such as HTML, CSS, Javascript and its many libraries.
 - * Adept at configuring and deploying applications on Unix-like systems.
 - **Related Technologies:** Spring MVC, Hibernate ORM, Bash.
- **BRAC University** Dhaka, Bangladesh
Teaching Assistant Jan 2014 - Aug 2016
 - **Data Structures and Discrete Mathematics:**
 - * Graded quizzes.
 - * Provided one-to-one consultations and exam hall invigilation.
 - * Assembled and distributed supplementary study materials.

DEEP LEARNING

- **Machine Learning with TensorFlow on Google Cloud Platform Specialization** Jan 2019
Online courses authorized by Google Cloud and offered through Coursera
 - **Introduction to Tensorflow:**
 - * Create machine learning models and solve numeric problems in TensorFlow.
 - * Troubleshoot and debug common TensorFlow code pitfalls.
 - * Use tf.estimator to create, train, and evaluate an ML model.
 - **End-to-End Machine Learning with TensorFlow on GCP:**
 - * User BigQuery to clean and create train and test data.
 - * Train and deploy an ML model on Cloud ML Engine using TensorFlow.
 - * Use TensorFlow Serving to provide real-time inference.
- **Deep Learning Specialization** Dec 2016 - Mar 2017
deeplearning.ai offering taught by Professor Andrew Ng of Stanford University
 - **Course 1: Neural Networks and Deep Learning:**

- * Understand the major technology trends driving Deep Learning.
- * Be able to build, train and apply vectorized implementations of fully connected deep neural networks.
- * Understand the key parameters in a neural network's architecture.
- **Course 2: Improving Deep Neural Networks, Hyperparameter tuning, Regularization and Optimization:**
 - * Understand industry best-practices for building deep learning applications.
 - * Be able to effectively use common neural network "tricks", including initialization, L2 and dropout regularization, batch normalization, gradient checking.
 - * Be able to implement and apply a variety of optimization algorithms, such as mini-batch gradient descent, Momentum, RMSprop and Adam, and check for their convergence.
 - * Understand new best-practices for the deep learning era of how to set up train/dev/test sets and analyze bias/variance.
 - * Be able to implement a neural network in TensorFlow.
- **Course 3: Structuring Machine Learning Projects:**
 - * Understand how to diagnose errors in a machine learning systems.
 - * Be able to prioritize the most promising directions for reducing errors.
 - * Understand complex ML settings, such as mismatched training/test sets, and comparing to and/or surpassing human-level performance.
 - * Know how to apply end-to-end learning, transfer learning, and multi-task learning.
- **Course 4: Convolutional Neural Networks:**
 - * Understand how to build a convolutional neural network, including recent variations such as residual networks.
 - * Know how to apply convolutional networks to visual detection and recognition tasks.
 - * Know to use neural style transfer to generate art.
 - * Be able to apply these algorithms to a variety of image, video, and other 2D or 3D data.
- **Course 5: Sequence Models:**
 - * Understand how to build and train Recurrent Neural Networks (RNNs), and commonly-used variants such as GRUs and LSTMs.
 - * Be able to apply sequence models to natural language problems, including text synthesis.
 - * Be able to apply sequence models to audio applications, including speech recognition and music synthesis.

Google Cloud Training

• Degree Thesis

Comparative Analysis Between Learning Models Using Facial Expression Recognition

Jan 2016 - Oct 2016

- **Objectives:**
 - * Investigate the training time and prediction accuracy of Google's Inception-v3 Deep Neural Network (DNN) architecture in comparison to popular variants of Support Vector Machines (SVM) and a Convolutional Neural Network (CNN) model of our own design.
 - * Do so using CPUs to assess it's viability as a feasible model for deployment in mobile devices.
- **Result:**
 - * The Inception-v3 architecture outperformed all previous benchmarks.

PROGRAMMING SKILLS

- **Languages:** Java, JavaScript, Bash, Python, Keras, TensorFlow, Numpy, Pandas, Matplotlib, fast.ai, Pytorch.