Md. Rayed Bin Wahed

Email: rayed@rayanalytics.org
Mobile: (+880) 1774882517

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 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**:
  * Grade quizzes.
  * Provid one-to-one consultations and exam hall invigilation.
  * Assemble and distribute supplementary study materials.

DEEP LEARNING

Machine Learning with TensorFlow on Google Cloud Platform Specialization
Online courses authorized by Google Cloud and offered through Coursera — *Jan 2019*
- **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
deeplearning.ai offering taught by Professor Andrew Ng of Stanford Univsersity — *Dec 2016 - Mar 2017*
- **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.

- **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.