

Md Rayed Bin Wahed

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Audacious, self-motivated individual with tremendous propensity to learn and implement. Incessant drive to improve and innovate. Demonstrated skill in web technologies and machine learning. Firm believer in using relevant skills for a more equitable, ethical, and greener tomorrow.

WORK EXPERIENCE

• Therap (BD) Ltd.

Dhaka, Bangladesh

Machine Learning Engineer

Oct 2019 - Present

Therap (BD) Ltd. is a wholly-owned subsidiary of Therap Services LLC., USA. Therap is a web-based application suite designed to provide a comprehensive solution for the planning, documentation, reporting, and billing needs of organizations supporting people with Intellectual and Developmental Disabilities (IDD).

- **Role:** A key figure in promoting machine learning and its subsequent inauguration. Currently leading a team of 4 engineers.
- **Customer Retention:** Trained a classification model to predict the departure of potential customers. Developed a feature recommendation system to facilitate greater discovery of services. Increased retention rate by 20%.
- **Fall Detection:** Implemented a fall detection neural network using inertial sensor readings from smartwatches. The system allows caregivers to reach affected individuals upto 80% faster.
- **Optical Character Recognition:** Leveraged Amazon Rekognition DetectText service to extract SpO2 and heart-rate measurements from images of pulse oximeters. The system improved inaccurate data entry by 30%.
- **Sleep Analysis:** Used sensor readings from Withings sleep mats to implement comprehensive sleep profiles (sleep state diagrams, bed in/out statistics) of IDD individuals. Intended to help caregivers tailor their assistance.
- **Server Log Analysis:** Analysed production server logs to identify ideal downtime for application release. Used historical data to plot trends in usage and produced reports.
- **Related Technologies:** Python, PyTorch, TensorFlow 2.0, Scikit-Learn, Numpy, Pandas, Matplotlib, Seaborn, Plotly, Amazon SageMaker, AWS Lambda.

• Therap (BD) Ltd.

Dhaka, Bangladesh

Full Stack Software Engineer

Oct 2016 - Sep 2019

- **Back-end:** Worked closely with engineering teams to understand product requirements, draw up design specifications, and implement core application features in Java using Spring MVC and Hibernate ORM.
- **Front-end:** Implemented interactive UI components in JavaScript. Reduced code clutter and improved site responsiveness by 20%.
- **Database:** 3 years of experience with Oracle Database. Wrote PL/SQL to migrate large volumes of data. Implemented indices for faster queries and optimization.
- **Deployment:** Experience deploying applications in Oracle Weblogic Server. Used Gradle to build applications and manage dependencies.
- **REST:** Implemented and consumed REST APIs for core system resources to be used internally by other teams and the mobile application.

PROJECTS

• We Are X

Dhaka, Bangladesh

Machine Learning Consultant (Contractual, Remote)

Jan 2019 - Mar 2019

Online social-media customer service platform for large enterprises.

- **Task:** Implemented a text classification model to classify customer queries written in Bengali and English. Achieved 90% accuracy working on a limited dataset.
- **Outcome:** Improved customer service representative productivity by 30% allowing We Are X to meet market demand keeping existing infrastructure intact.

• Online Clothing Store

Dhaka, Bangladesh

Personal Demo Project

May 2020 - Jul 2020

Implemented an online clothing store using React, Redux, and Google Cloud Firestore. The purpose was to learn and gain experience building front-end components in React and serverless web development.

CERTIFICATES

- **Machine Learning Nanodegree** Dhaka, Bangladesh
Udacity Nov 2019 - Jan 2020
 - **Certificate earned on January 30, 2020:** [Link to Certificate](#).
 - **Project:** Implemented a Human Activity Recognition (HAR) LSTM deep learning model using WISDM Smartphone and Smartwatch Activity and Biometrics Dataset. Obtained an accuracy of 90% using just the smartwatch data.
- **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
 - **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](#).

EDUCATION

- **BRAC University** Dhaka, Bangladesh
Bachelor of Science in Computer Science Jan 2012 - Aug 2016
 - **High Distinction:** Awarded High Distinction for a Cumulative Grade Point Average (CGPA) of 3.75/4.00.
 - **Merit Based Scholarship:** Awarded Merit Based Scholarship for the duration of the entire program.
 - **Teacher Assistant:** Worked part-time as a TA for courses Data Structures and Discrete Mathematics starting junior year.

AWARDS AND HONORS

- **President's Volunteer Service Award** USA
President's Council on Service and Civic Participation Aug 2008
 - **Recognition:** Awarded President's Volunteer Service Award from the President's Council on Service and Civic Participation for outstanding service to community and country.
- **Youth Exchange and Study (YES) Program** Seattle, USA
Aspect Foundation Aug 2007 - Sep 2008
 - **Recognition:** One of twenty students from Bangladesh to successfully complete the US Department of State funded YES Program. A humbling experience that prides itself in leadership, cultural values, and acceptance.
- **International School Cricket Premier League** Lucknow, India
ISCPL Jan 2011
 - **Recognition:** Represented Bangladesh as a cricketer in the first ever International School Cricket Premier League organized by City Montessori School & Degree College and sponsored by the International Cricket Council (ICC).