Md Rayed Bin Wahed

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Software engineer with considerable experience in developing SaaS applications and machine learning. An ambitious yet pragmatic project manager with a proven track record of delivering compelling new products. Humble and cheerful, a firm believer in using technology for a more equitable, ethical, and greener tomorrow.

WORK EXPERIENCE

- **Therap (BD) Ltd.** — Dhaka, Bangladesh
  Team Lead, Machine Learning — *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 establishment. Responsible for spearheading new initiatives and team growth. 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. Improved caregivers ability 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. 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**: Extensive experience deploying applications in Oracle Weblogic Server. Used Gradle to build applications and manage dependencies.
  - **REST**: Skilled in implementing and consuming 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 Univsersity
  - **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).