Md. Rayed Bin Wahed

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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 Data Structures and Discrete Mathematics starting junior year.

WORK EXPERIENCE

- **Therap (BD) Ltd.**   Dhaka, Bangladesh
  Machine Learning Team Lead   *Oct 2019 - Present*
  - **Responsibilities**:
    * Established a machine learning team from the ground up by recruiting and training fresh university graduates to prototype new business initiatives and enhance our core service. Currently leading a team of 4 engineers.
    * Implemented a fall detection system using an LSTM neural network and accelerometer and gyroscope sensor data. Our system alerts a caregiver when an IDD (Intellectual and Development Disability) patient has a fall event allowing the caregiver to attend to the patient approximately 3 times faster.
    * Implemented a HAR (Human Activity Recognition) system using an LSTM neural network with a 1D Convolution head and accelerometer and gyroscope sensor data. Recording a patient's daily activities was a big challenge since it required a caregiver to continuously monitor the patient and manually enter the data. Our system automated that process and significantly improved both its speed and accuracy.
    * Implemented an object detection system by fine-tuning the Detectron2 CNN model to detect sharp and blunt objects such as knives and baseball bats respectively. Once fully integrated with the care facilities' surveillance system, we hope to completely eliminate injurious incidents caused by patients using stray objects to inflict pain.
  - **Related Technologies**: Python, PyTorch, TensorFlow and Keras, Scikit-Learn, Numpy, Pandas, Matplotlib and Seaborn, Amazon SageMaker, Oracle Cloud Infrastructure.

- **Therap (BD) Ltd.**   Dhaka, Bangladesh
  Full Stack Software Engineer   *Oct 2016 - Sep 2019*
  - **Responsibilities**:
    * Implemented numerous application modules from scratch writing the backend, the frontend, and the database schema. These modules made us more competitive in terms of the number of features that we offered allowing us to secure multiple 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 functionality and extensibility. 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, SQL, HTML, CSS, JavaScript, Gradle, Bash, 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 online customer service business - responding to customer queries in social media platforms. To that end, I implemented a text classification model that could classify customer queries written in Bengali and English with 90% accuracy working on a limited dataset. This improved customer service representative productivity by 3 times allowing We Are X to meet market demand keeping existing infrastructure intact.

CERTIFICATES

- **Machine Learning Nanodegree**
  Udacity
  - **Certificate earned on January 30, 2020**: Link to Certificate.

- **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.

HOBBIES AND INTERESTS

- **Things that make me, me!**
  When I'm not hacking away at code or ripping my hair off because of it, this is what I'm most likely doing
  - **Music**: Playing a tune on my guitar is one of my most desired and uplifting of 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 that you give it a shot if you haven't. 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 in centered on reading. Two of my all-time favorite non-fiction books and a must read for everyone on earth are: The Sapiens and The Selfish Gene.