

# Md Ashraful Islam

**Research Assistant | Senior Software Engineer | BigData | NoSql | GraphDB | Machine Learning**

Edinburg, TX 78541

[mdashrafulislam58\\_g4g@indeedemail.com](mailto:mdashrafulislam58_g4g@indeedemail.com)

+1 956 616 1110

Hi, I am Ashraful Islam. I am studying Computer Science at The University of Texas Rio Grande Valley(UTRGV). I have completed my B.Sc Engineering in CSE from Shahlalal University of Science and Technology(SUST), Sylhet Bangladesh.

Currently, I am working as a Research Assistant at Machine Intelligence Lab, UTRGV. The lab team is led by Dr. Dongchul Kim and is made up of some of the top undergraduate and graduate students at the University of Texas-Rio Grande Valley. Here I am working on Molecule Generation and Virtual Screening Drug Discovery. I have also worked on IntelliBeeHive, an intelligent beehive monitoring system that can detect bees, track bees, count in/out in real-time

I have worked as a Software Engineer in Data Team at Goava Sales Intelligence AB. Goava is an insight tool for the B2B salesperson. Goava uses big data and machine learning to discover most likely buyers, provide company dashboard, monitor web, social media, notify important events of a company to relevant companies. In Goava I have used Apache Nutch, Apache Spark, ElasticSearch, RDS, AWS Cloud Services like Lambda, API Gateway, ECS, EMR, EB to developed Distributed Company Website Crawler, Distributed Company Data Importer, Extract Employees information from Website, Similar Company API, Prospector Feed API etc.

Previously I have worked at a company named IPVision Canada Inc for 2 years. IPVision is working in diverse sectors of the IT and Telecommunication Industry. Their main goal is to develop a Multi-Dimensional Social Network named RingID. RingID has NewsFeed, Chat, Audio/Video Call, Live, Channel etc. I was in the Big Data R&D Team. At first, we tried to understand the internal architecture of Apache Cassandra, Apache Solr, Apache TinkerPop, JanusGraph etc. Then we started developing Distributed, Scalable API that required for RingID. I have also developed a simple Graph Search and a Phonetic Name search for RingID.

In my free time, I try to contribute to StackOverflow. here I have a 10k+ reputation and my top tags are Cassandra, Java, Solr

Willing to relocate: Anywhere

Authorized to work in the US for any employer

## Work Experience

---

### Research Assistant

Machine Intelligence Lab, UTRGV - Edinburg, TX

June 2021 to Present

The Machine Intelligence research team is led by Dr. Dongchul Kim and is made up of some of the top undergraduate and graduate students at the University of Texas-Rio Grande Valley.

- Working on Molecule Generation and Virtual Screening Drug Discovery
- Worked on IntelliBeeHive, an intelligent bee hive monitoring system that can detect bees, track bees, count in/out in real time
- Leveraged knowledge in Reinforcement Learning, Deep Learning, Computer Vision, Object Detection, Object Tracking

## **Team Lead/Senior Software Engineer**

Goava Sales Intelligence AB - Dhaka

December 2017 to May 2021

An insight tool for the B2B salesperson. Goava uses big data and machine learning to discover most likely buyers, provide company dashboard, monitor web, social media, notify important event of a company to relevant companies.

- Fully Implemented Goava Discover API, a smart prospecting service for B2B sales
- Fully Implemented Find Companies, a smart company data search and filter service
- Fully Implemented Customer Fit, a customer fitness measuring service shows top apt and inapt reasons
- Worked on company name and significant event detection in news articles
- Worked on Crawling, Parsing, Indexing, Data Mining Nordic companies data
- Leveraged knowledge in Python, AWS Services, Elasticsearch, Apache Nutch, MySQL, Recommendation System, Machine Learning

## **Big Data R&D Developer**

IPVision Canada Inc. - Dhaka, BD

August 2015 to November 2017

Parent company of the Multi-Dimensional Social Network RingID. RingID has NewsFeed, Chat, Audio/Video Call, Live, Channel etc.

- Research and Developed Trending Media service
- Research and Developed Recommended Media service
- Research and Developed Graph Search
- Research and Developed Bangla Phonetic Search
- Developed RingID APIs in Distributed, Linear scalability, high availability NoSQL database Apache Cassandra
- Leveraged knowledge in Java, Apache Cassandra, Apache Solr, MySQL, GraphDB, Recommendation System, Machine Learning

## **Android Developer**

Webcraft Bangladesh - Sylhet

January 2013 to June 2015

Cross Platform Mobile Web, App & Game Development Team

- Android Live Radio

<https://play.google.com/store/apps/details?id=com.webcraftbd.radio>

- ESL Café Podcast

<https://play.google.com/store/apps/details?id=com.webcraftbd.podcast>

- Amazing Photography

<https://play.google.com/store/apps/details?id=com.webcraftbd.flickr>

- Android Live TV

<https://play.google.com/store/apps/details?id=com.webcraftbd.tv>

## Education

---

### **Master's degree in Computer Science**

The University of Texas-Pan American - Edinburg, TX  
June 2021 to December 2022

### **Bachelor of Science in Computer Science and Engineering**

Shahjalal University of Science and Technology - Sylhet  
January 2011 to September 2015

## Skills

---

- Python
- Java
- AWS
- MySQL
- Hadoop
- Git
- C
- SQL
- Gremlin
- Machine Learning
- Deep learning
- Reinforcement Learning
- Big Data
- Data mining
- Amazon Web Services
- NoSQL
- Graph databases
- Elasticsearch
- Cassandra
- Apache Solr
- Apache Nutch
- Apache Hadoop
- Spark

- MySQL
- Amazon RDS
- Amazon DynamoDB
- JanusGraph
- NumPy
- TensorFlow
- PyTorch
- Android
- Git

## Links

---

<http://www.linkedin.com/in/ashraful-islam-a336b271>

<https://ashrafulsust.github.io/resume/>

<https://stackoverflow.com/users/2320144/ashraful-islam>

## Publications

---

### **Comparison of VQ and GMM for Text In- dependent Speaker Identification System for The Bengali Language**

[https://www.researchgate.net/](https://www.researchgate.net/publication/335879199_Comparison_of_VQ_and_GMM_for_Text_Independent_Speaker_Identification_System_for_The_Be)

[publication/335879199\\_Comparison\\_of\\_VQ\\_and\\_GMM\\_for\\_Text\\_Independent\\_Speaker\\_Identification\\_System\\_for\\_The\\_Be](https://www.researchgate.net/publication/335879199_Comparison_of_VQ_and_GMM_for_Text_Independent_Speaker_Identification_System_for_The_Be)

September 2019

Speaker identification (SI) is the system to identify the person by the signal pattern of their voices. In recent years, many speaker identification models are proposed, but till now speaker identification technology do not reach their full potential. This paper presents a comprehensive comparative study of VQ and GMM to identify the speaker who speaks in Bengali accent. We consider the problem of text-independent speaker identification. We compare the performance/accuracy of VQ and GMM based Speaker Identification System (SIS). We use Mel Frequency Cepstral Coefficients (MFCC) and Linear Predictive Coding Coefficients (LPCC) for feature extraction.

### **Comprehending Real Numbers: Development of Bengali Real Number Speech Corpus**

<https://arxiv.org/abs/1803.10136>

March 2018

Speech recognition has received a less attention in Bengali literature due to the lack of a comprehensive dataset. In this paper, we describe the development process of the first comprehensive Bengali speech dataset on real numbers. It comprehends all the possible words that may arise in uttering any Bengali real number. The corpus has ten speakers from the different regions of Bengali native people. It comprises of more than two thousands of speech samples in a total duration of closed to four hours. We also provide a deep analysis of our corpus, highlight some of the notable features of it, and finally evaluate the performances of two of the notable Bengali speech recognizers on it.

## **A noble approach for recognizing Bangla real number automatically using CMU Sphinx4**

<https://ieeexplore.ieee.org/document/7760121>

May 2016

Speech recognition is widely researched topic around the world. It is a process of conversion of speech to text. Many scientists and researchers are busy with doing works to increase the performance of speech recognition systems. Most of the languages in the world have speech recognizer of its own. But in our mother tongue Bangla there is no working speech recognizer. This work is little try to build a Bengali speech recognizer to enrich our language. In this paper we have proposed a noble approach to develop an automatic Bangla Real Number recognizer and analyze the performance of this recognition system using the most popular speech recognizer API CMU Sphinx 4 and a popular Bangla Unicode based writing software called Avro.