

# S. MAHMUDUL HASAN

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## EDUCATION

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**Bangladesh University of Engineering and Technology, Dhaka**

2014 - 2018

B.Sc Engg. in Computer Science and Engineering (CSE)

CGPA: 3.65 / 4.00

## STANDARDIZED TEST SCORES

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**GRE: 328 / 340**

Quantitative	Verbal	Analytical Writing	Date Taken
167 89 <sup>th</sup> Percentile	161 88 <sup>th</sup> Percentile	4.5 80 <sup>th</sup> Percentile	Aug 28, 2019

**TOEFL: 113 / 120**

Reading	Listening	Speaking	Writing	Date Taken
30	29	24	30	Sep 21, 2019

## RESEARCH INTERESTS

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- Applied machine learning and deep learning
- Software and network security
- Software engineering

## RESEARCH EXPERIENCE

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### Undergraduate Thesis

*Title: Discovering Potential Factors of Disease Outbreaks Using Biological Data Mining*

Accumulated data on different diseases' natures and their outbreaks, and different socioeconomic conditions of different countries around the world. Analyzed the data using different statistical and machine learning techniques to infer the potential socioeconomic factors that can be related to disease outbreaks.

**Supervisor:** Dr. A. B. M. Alim Al Islam

## WORK EXPERIENCE

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**Eastern University, Dhaka**

February 2020 - Current

*Lecturer, Department of CSE*

Instructed courses (including labs) on Structured Programming Language, Compilers and Algorithms.

**Canadian University of Bangladesh, Dhaka**

February 2019 - September 2019

*Lecturer, Department of CSE*

Instructed courses (including labs) on Structured Programming Language, Compilers, Computer Networks and Mobile Application Development.

**REVE Systems, Dhaka**

April 2018 - July 2018

*Intern*

Worked on development of Bangla Text To Speech (TTS) and Speech To Text (STT) systems. Developed a system for collecting and annotating Bangla speech data.

## TECHNICAL STRENGTHS

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<b>Programming Languages</b>	C/C++ , Python , Java, Assembly
<b>Markup Languages</b>	HTML, XML, $\text{\LaTeX}$ , Markdown
<b>Database</b>	MySQL, Sqlite, Oracle
<b>Machine Learning</b>	Keras, PyTorch, Scikit-Learn, Pandas, NumPy
<b>Software &amp; Tools</b>	Git, Android SDK, Ionic, JavaFX, Java Servlet API, Tkinter, Flask

## SELECTED PROJECTS

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### **Image Data Collection and Labeling System**

Image data collection and labeling system built using Ionic framework and Python Flask.

### **Bangla Handwritten Digit Recognition**

Implemented a simple CNN based classifier for Bangla handwritten digit recognition which achieved 89% accuracy on data collected through Image Data Collection and Labeling System.

### **Smile Detection**

Implemented CNN based classifier (93% test accuracy) for detecting smile and implemented code for using the trained classifier in realtime.

### **Facial Expression Recognition**

This was a course project done using Keras library. We achieved about 60% accuracy in the model we implemented using the dataset available at Kaggle.

### **BrackFire**

Fire service calling and tracking application built using Android SDK, GoogleMaps API, Firebase API and Firebase Cloud Messaging(FCM) API.

### **FileShare**

A two part system, for file sharing between Windows, Android and Linux using a common Wifi network, built using JavaFX and Android SDK.

### **BizziBay**

A digital shopping system which can be used to buy and sell products online. Front end is done in Android SDK as well as in simple HTML/CSS/JS while back end runs on Python Django framework.

### **MediaPlayer**

This a simple mp3 and mp4 player which supports creation and saving of playlists. This was done in JavaFX.

### **Simple Gaming Database**

This is a generic database for two player games like Chess, Go, Checkers, etc. It supports creation of multiple players and arrangement of tournaments. It has a forum which can be used as a communication media for the players. Oracle Database and Java Servlet API were used to build it.

### **SpaceInvaders**

A simple 2D game built using iGraphics library. It was done as a requirement in CSE102: Structured Programming Language Sessional course.

## AWARDS AND SCHOLARSHIPS

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<b>Dean's List</b>	Level 3, Term 2 (Third year, Second semester)
<b>University Stipend</b>	Level 1, Term 1 (First year, First semester)
<b>Board General Scholarship</b>	HSC (2013)

## EXTRA CURRICULAR ACTIVITIES

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### **Competitive Programmar**

Used to solve programming problems and take part in Competitive Programming Contests

UVA Profile Link: <https://uhunt.onlinejudge.org/id/404339>

## REFERENCES

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Available on request