

## Afia Afrin

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201, 9845, 82 AV, NW  
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email: aafrin@ualberta.ca

### Education

**M.Sc.** (ongoing) in Computing Science  
University of Alberta, Canada.

**B.Sc.** in Computer Science and Engineering  
Bangladesh University of Engineering and Technology  
GPA: 3.86/4.00  
Rank: 10/136 (in order of merit)

### Professional Experience

Assistant Engineer  
Bangladesh Power Development Board  
Dhaka, Bangladesh

*on study leave*

Lecturer  
Department of Computer Science and Engineering  
University of Asia Pacific, Bangladesh

*April 2017- September 2018*

- CSE 105: Discrete Mathematics
- CSE 206: Data Structures Lab
- CSE 211: Assembly Language Programming
- CSE 212: Assembly Language Programming Lab
- CSE 322: Database Systems Lab
- CSE 304: Operating Systems Lab

### Research Experience

Handwritten Character Recognition  
with Dr. Md. Rashedul Islam

- Implemented a system for the recognition of handwritten Indic numerals using Convolutional Neural Network and co-authored a conference paper.

EnviroSCALE: Middleware for IOT Platform  
with Dr. Md. Yusuf Sarwar Uddin

- Completed undergraduate thesis titled “EnviroSCALE - An IoT-based Air Quality Monitoring System using Constrained Data Connections”, researched operation of IoT devices in 3G, implemented a working system using MQTT to send alert for environmental anomalies via smartphones, and co-authored two conference papers.

### Publications

Abdul Kawsar Tushar, Akm Ashiquzzaman, **Afia Afrin**, and Md. Rashedul Islam, “A Novel Transfer Learning Approach upon Hindi, Arabic, and Bangla Numerals using Convolutional Neural Networks”, International Conference on Computational Vision and Bio Inspired Computing (ICCVBIC 2017), 2017 in Tamil Nadu, India.

Mahmudur Rahman Hera, Hua-Jun Hong, Amatur Rahman, Pei-Hsuan Tsai, **Afia Afrin**, Md Yusuf Sarwar Uddin, Nalini Venkatasubramanian and Cheng-Hsin Hsu, "Adaptive Sensing Using Internet-of-Things with Constrained Communications", Workshop on Adaptive and Reflective Middleware (ARM), co-located with ACM/ IFIP/ USENIX Middleware, Dec 11-15, 2017, Las Vegas.

Mahmudur Rahman Hera, Amatur Rahman, **Afia Afrin**, Md. Yusuf Sarwar Uddin, and Nalini Venkatasubramanian. "AQBox: An Air Quality Measuring Box from COTS Gas Sensors." In Proceedings of 2017 International Conference on Networking Systems and Security (NSysS), IEEE, Jan 5-8, 2017, Dhaka, Bangladesh.

**Extracurricular Activities**

- Worked as one of the members of NCTB's book revision team (2018) supervised by Professor Dr. M. Kaykobad
- 3<sup>rd</sup> place, Imagine Cup 2016 National Round (Bangladesh), 2016

**Computer Skills**

Programming Languages: C, C++, Java, Python, Assembly (8086)  
 Web & Database: PHP, PL/SQL  
 Scripting: HTML, LaTeX

**Academic Honors**

**University Merit Scholarship**, awarded by Bangladesh University of Engineering and Technology in last four semesters.

**Dean's List of Distinguished Students**, awarded by Bangladesh University of Engineering and Technology in two consecutive academic years.

**High School General Scholarship**, awarded by Bangladesh Education Board.

**Selected Projects**

**Do-It-All** April 2016  
 Presented at Microsoft Imagine Cup, National Round

- Collaborated on a team to develop a web platform built on *Microsoft Azure* to help people find the least cost solution of day to day problems.

**Intelligent Board Games** 2016  
 Academic project, 7<sup>th</sup> semester

- Interactive single and multi-player AI-based contemporary board games (FloodIt, Four in a Row and Futoshiki).

**Simulation of Adding a malicious (jammer) node in AODV Protocol** Dec 2015

Academic project, 5<sup>th</sup> semester

- Simulation of network security breaches in Wireless Sensor Networks using *ns2*.

**Color Detector** Dec 2015

Academic project, 5<sup>th</sup> semester

- An *AVR-microcontroller* based color detection system.

**Peer to Peer E-Book Website** Oct 2015

Software Engineering Course project, 5<sup>th</sup> semester

- A platform for sharing books easily.

- Worked with *Oracle Database* and *CodeIgniter* PHP framework.

**Interactive Learning Tool** 2014

Academic project, 4<sup>th</sup> semester

- An interactive alphabet learning tool using *Assembly 8086*.

**LAN Phone** 2014

Academic project, 3<sup>rd</sup> semester

- A *Java* application for voice transmission.

**Scrabble Word Game** 2013

Academic project, 2<sup>nd</sup> semester

- Single player block game using *C*

**Test Score**

**IELTS**

Overall: 8.0 (L: 9.0, R: 9.0, W: 7.0, S: 7.5)

**References**

**Dr. Md. Yusuf Sarwar Uddin**

Assistant Professor

Department of Computer Science and Electrical Engineering (CSEE)

University of Missouri-Kansas City

570E Flarsheim Hall, 5110 Rockhill Rd, Kansas City, MO 64110

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**Dr. M. Kaykobad**

Distinguished Professor, Department of Computer Science and Engineering,  
Brac University

Former Professor, Department of CSE,

Bangladesh University of Engineering and Technology (BUET)

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**Dr. Md. Rashedul Islam**

Senior Architect, RD department, Exvision Corporation, Tokyo, Japan

Associate Professor (On leave), Dept. of Computer Science Engineering, University of Asia Pacific.

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