## Afzal Hussain

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# EDUCATION ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)

BACHELOR OF SCIENCE Expected:November 2018 Major: Mechanical Engineering Faculty of Engineering Cum. GPA: 3.69 / 4.0

#### CONTACTS/LINKS

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#### **COURSEWORK**

#### **UNDERGRADUATE**

Computer Aided Design (CAD) Automatic Control System Mechatronics Computer Programming Machine Design Engineering Mathematics

#### **MOOCS**

Deep Learning Specialization Coursera A Hands-on Introduction to Engineering Simulations | edX Using Python for Research | edX Machine Learning | Coursera

#### **SKILLS**

#### **PROGRAMMING**

Languages: C++ • Python • MATLAB •ATEX Scientific Computing:

scikit-learn ullet TensorFlow ullet Keras

Familiar:

HTML • CSS • PHP • JS • MySQL

#### **PROJECT**

#### PROPERTYTABLE | WEB DEVELOPMENT

In short, propertytable.online is an engineering database website. It was developed to make engineering calculation easier by finding properties of different substances at desired units. The whole back-end of this website is build from scratch using PHP & MySQL.

## PHYSICS-INFORMED DEEP LEARNING | UNDERGRADUATE RESEARCH

It is an ongoing research project where newer deep learning models i.e. Convolutional LSTM, Generative Adversarial Networks (GAN) are used to predict complex fluid flow phenomenon.

#### **EXPERIENCE**

### **ENGINEERING INTERN** | BANGLADESH POWER DEVELOPMENT BOARD Nov 2017 | Rajshahi, Bangladesh

- Learnt about BPDB and power sector of Bangladesh.
- Visited three different power plants, get hands on demonstration in power generation, distribution and plant maintenance.

#### **CAMPER** | BANGLADESH ASSOCIATION OF PROBLEM SETTERS (BAPS)

Oct 2016 | Dhaka, Bangladesh

- Camp was arranged for selected undergraduate students for ICPC Dhaka Regional preparation.
- Learnt different types of algorithm that commonly appears in competitive programming like Graph Theory, Dynamic Programming, Computational Geometry & Data Structure.

#### **CONTESTANT | PROGRAMMING COMPETITION**

Dec 2013 - Feb 2016 | Dhaka, Bangladesh

- Participated programming contests at school level both at regional & national level.
- Represented undergrad university at ACM ICPC Dhaka Regional, NCPC & other different national contests during freshman year.

#### RESEARCH

#### **CONFERENCE** | SGIOT 2018

July 11-12, 2018 | Niagara Falls, Canada

Khandaker, S. M., Hussain, A., & Ahmed, M. (2018). *Effectiveness of Hard Clustering Algorithms for Securing Cyber Space* (pp. 1-8). 2nd EAI International Conference on Smart Grid and Internet of Things.

Investigated the effectiveness of different hard clustering techniques for identification of a range of state-of-the-art cyber attacks.

#### **AWARDS**

2015	2nd	ICPC Team selection Contest, IUT
2015	4th	Intra-IUT Computer Programming Contest
2014	National	Bangladesh Olympiad on Astronomy and Astrophysics, Finalist
2014	National	Bangladesh Physics Olympiad (BdPhO), Finalist
2013	National	Bangladesh Olympiad in Informatics (BdOI), Finalist