Md. Ashfaqur Rahaman

Carriculum Vitae

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Research Interests

- Operating Systems and System Programming
- Operating System Security
- Networking
- Linux Kernel
- Embedded Systems
- Computer Architecture

Experience

Research

Dec. 2018-Aug. 2019
Research Assistant, *Climate Modeling and Simulation Lab*, IWFM, BUET.
I worked as a system developer in Flash Flood Early Warning System (FFEWS) project

Professional

Apr. 2018-Apr. 2019
Lead Software Engineer, *NextGen Digitech*, Dhaka.
Worked on a computer application for designing wind turbines. I have contributed in the core software architecture and designed the GUI

Oct. 2017-Mar. 2018
Firmware Engineer, *2RA Technology Limited*, Dhaka.
I have worked on different projects based on Raspberry Pi and AVR Microcontrollers. Here are few of them:

Energy Monitoring System A system for monitoring a textile industry's power generators from the web

UHF Attendance System Automated attendance system for schools using ultra high frequency technology

Battery Voltage Monitoring System A battery voltage and temperature monitoring system for an industry's backup power system in different sites accross the country and centralize the data

Temperature Monitoring System Designed web based temperature monitoring system for a company's parking lot.

Competetions

2018 **Google Kickstart Coding Competetion**, *Google*.
Participated in the qualification round and solved all the problems.

2016 **RoboSoccer Competetion**, *Engineering Student Association Bangladesh (ESAB)*.
We have participated in the competetion and got honorable mention

2015 **Model Ship Propulsion Competetion**, *BUET*.
My team secured third position. I have worked in the programming and hardware interfacing part

2015 **Android App Contest**, *EATL-Prothomalo*.
We developed an Android application for cheking OMR sheets by using image processing algorithms. Our app was in the top 100 list.

Training and Courses

○ Operating Sytem and System Programming CS162, Berkeley (On going)

○ Mathematics for Computer Science 6.042J, MIT OCW

○ Introduction to Algorithms 6.006, MIT OCW

○ Practical Programming in C 6.087, MIT OCW

○ Advanced C++ Programming for Ship Structure, BUET

○ Fortran Programming, BUET

Skills

Programming Languages	C, C++, Python, JAVA, Bash, Assembly(AVR, X86)
Frameworks	Qt, Android
Embedded Systems	AVR Microcontrollers, Raspberry Pi, Arduino
GNU/Linux	6 years of experience in the GNU/Linux environment
VCS	Git and Github
Text Editing	Vim, LaTeX
GRE	313, Quantitative - 162, Verbal - 151, AWA - 3.0
TOEFL	101, Reading - 28, Listening - 27, Speaking - 23, Writing - 23

Education

2012-2019 **B.Sc in Naval Architecture and Marine Engineering**, *Bangladesh University of Engineering and Technology (BUET)*, *CGPA − 2.69 on 4.00*.

2011 **Higher Secondary Certificate Exam**, *Dhaka College*, Dhaka Board, *GPA − 5.00 on 5.00*.
Science Devision

2009 **Secondary School Certificate Exam**, *A. K. High School and College*, Dhaka Board, *GPA − 5.00 on 5.00*.
Science Devision

Bachelor Thesis

Title	*Power Efficient Remotely Operated Underwater Vehicle Using Buoyancy Chembers*
Supervisor	Professor Dr. Md. Mashud Karim
Description	In this thesis, a power efficient remotely operated underwater vehicle (ROV) has been built using buoyancy chambers.Conventionally, thruster motors are used for the propulsion of the ROV. In this system to keep the vehicle at rest in a fixed position under water, thruster motors are used and battery power is consumed continuously. This power loss can be removed by adding simple buoyancy mechanism. A control algorithm has been developed to control all the valves and pump. Also a computer program has been developed to communicate with the onboard controller of the ROV.