Md Ashfaqur Rahaman

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Research Interests

My research interest is in the intersection of data center networking, operating systems and compilers. I want to work on problems where coordination between these is needed to improve system performance.

Education

Aug. 2021 — **Ph.D. in Computer Science**, *University of Utah*, Salt Lake City, Utah, USA.
Advisor: Ryan Stutsman *and* Brent Stephens

2012-2019 — **B.Sc. in Naval Architecture and Marine Engineering**, *Bangladesh University of Engineering and Technology (BUET)*, Dhaka, Bangladesh.

Experience

Research

2019-2021 — **Voluntary Research Assistant**, *Prof. Baris Kasikci's Lab*, University of Michigan, Ann Arbor.
Mentor: Tanvir Ahmed Khan
I worked on profile guided optimizations of large application binaries in warehouse scale computers to reduce i-cache misses.

2018-2019 — **Research Assistant**, *Climate Modeling and Simulation Lab*, IWFM, BUET.
Advisor: A.K.M. Saiful Islam
I worked as a system developer in Flash Flood Early Warning System (FFEWS) project. We have developed a real time flash flood warning system by integrating weather, hydrologic and river modeling systems into a single platform.

Professional

2018-2019 — **Software Engineer**, *NextGen DigiTech*, Dhaka.
Worked on NextGen Tower, a desktop application for designing wind turbines. I contributed in the core software architecture and developed the GUI.

2017-2018 — **Firmware Engineer**, *2RA Technology Limited*, Dhaka.
I worked on various embedded projects based on Raspberry Pi and AVR Microcontrollers.

Competitions

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

2016 — **RoboSoccer Competition**, *Engineering Student Association Bangladesh (ESAB)*.
My team got honorable mention in the competition.

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

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

Bachelor Thesis

Title — *Power Efficient Remotely Operated Underwater Vehicle Using Buoyancy Chambers*

Supervisor — Dr. Md. Mashud Karim

Courses

- Operating System and System Programming CS162, UC Berkeley
- Digital Design & Computer Architecture, Prof. Onur Mutlu
- Compilers CS143, Stanford
- Mathematics for Computer Science 6.042J, MIT OCW
- Introduction to Algorithms 6.006, MIT OCW
- Practical Programming in C 6.087, MIT OCW

Skills

Languages	C, C++, Python, JAVA, Assembly(AVR, X86), Shell script, SQL, PHP, HTML, CSS
Tools	LLVM, Linux perf, eBPF, XDP, BOLT, Awk, Flex/Bison, Qt, Android
Embedded	AVR Microcontrollers, Raspberry Pi, Arduino
Text Editing	Vim, LaTeX