MD ASHIQUR RAHMAN

GRADUATE STUDENT ~ THE UNIVERSITY OF ARIZONA

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Skills

Research	Computer Networks (routing in ad hoc networks, scheduling algorithms in vehicular networks)
Coding	C/C++, familiar with Python and Java
Tools	Docker, NS-3, CSIM, Vim, GDB.
Others	Database systems, Natural language processing, Information retrieval.

Education

- ***Graduate:*** *PhD, Computer Science, The University of Arizona, AZ* *08/2016-05/2021*
  MS in Computer Science, The University of Arizona, AZ (GPA: 3.75/4.00) *08/2016-05/2020*
  - **NLP**: Built a weighted dropout probability-based system to support multi-level token annotation in medical literature. Near SoTA performance with significantly lower training time. (***Python, Docker***).
  - **Information Retrieval**: Built a (part of) Watson to index and retrieve top relevant Wikipedia pages for short queries similar to the Jeopardy game. Built a spam classifier. (***Scala, Lucene***)
  - **DBMS**: Implemented heap-file, buffer manager and B+ tree of a MINIBASE database system in ***C***.
  - **Networks**: Implemented a software router with ARP and PWOSPF protocol supporting link failure in ***C***.

  Relevant Coursework: Principles of Computer Networks; Algorithms in NLP; Text Retrieval & Web Search; Operating Systems; Database Systems and Implementation; Algorithms in Bioinformatics;

- ***Undergraduate (BSc):*** *Computer Science and Engineering, Khulna University of Engineering & Technology (KUET), Bangladesh (GPA: 3.60/4.00)* *2011-2015*
  - **Thesis**: Application of network coding in scheduling algorithms in multi-RSU vehicular ad-hoc networks. *Published six papers* from related studies, two as the first author, two as second and two as third. (***CSIM with C++***).
  - **Software Development**: Implemented a gas station automation software, (***C#, .NET, Crystal Reports***).
  - **Programming (C++)**: Four ACM ICPC regionals, IUT-ICT Fest (best- 14th). Workshop manager and trainer.
  - **Hardware Project**: Designed a car with programmable microcontroller; Logisim and FPGA circuit design.

  Relevant Coursework: Software Engineering; Computer Networks; Data Communication; Machine Learning; Artificial Intelligence; Fault-tolerant systems; Data Structures and Algorithms; Mathematical Analysis; Computer Architecture and Organization; Digital System Design; Digital Logic Design; Peripherals and Interfacing.

Experience

- ***Instructor***
  Computer Science, The University of Arizona, AZ *Summer 2020*
  Teaching: In-person; CSC210 Software Development: Problem decomposition, solution design and data structures using Java

- ***Graduate Associate***
  Computer Science, The University of Arizona, AZ *2016-Present*
  Research: Architectural differences between Named Data Networking (NDN) and IP in mobile ad-hoc networks (submitted). Routing in challenging networks.
  Teaching: CSC 425: Computer Networks (grader and project maintainer), Spring-17, Fall-17, Spring-20.
  CSC 452: Operating Systems (grader), Fall-19.

- ***Instructor***
  Computer Science and Engineering, Daffodil International University, Bangladesh *2015-2016*
  Teaching (in-person): CS 113: Intro to Programming, CS 134 Data Structures, CS 221: Algorithms.
  Mentor, Contest organizer and Judge: Competitive programming: Beginner and Intermediate.

- ***Workshop Manager and Trainer***
  Special Group of Interest in Programming Contests (SGIPC), KUET, Bangladesh *2012-2015*