## MD **ASHIQ**UR **RAHMAN**

PhD Student ~ The University of Arizona



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in ashigopu117



ashiqopu



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## **Skills**

Research Computer Networks, Named Data Networking, routing in mobile ad-hoc networks,

scheduling algorithms with network coding in RSU-based vehicular ad-hoc networks (V2I).

Coding and Tools C/C++ (preferred), familiar with Scala, Java and Python, ViM, GDB, Lucene, Docker.

Others Natural language processing, Database systems, Information retrieval.

## **Experience**

**Graduate Assistant** 

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. CSC 452: Operating Systems (grader).

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 Contest (SGIPC), KUET, Bangladesh

2012-2015

## **Education**

Graduate (PhD): Computer Science, The University of Arizona, AZ (GPA: 3.75/4.00)

2016-Present

- Student Developer: NDN Forwarding Daemon (NFD): (https://named-data.net/doc/NFD/current/).
- Built a weighted probability dropout-based system to supports multi-level token annotation in medical literature in NLP. Near SoTA performance with significant lower training time. Tools: Python, Tensorflow, Docker.
- Implemented heapfile manager, buffer manager, B+ tree of a MINIBASE database system. Tool: C.
- Built an end-to-end Information retrieval system that indexes a large Wikipedia corpus to retrieve top relevant pages for short queries similar to Jeopardy game. Built a spam classifier. Tools: Scala, Lucene, Apache Maven.
- Implemented a software IP router with ARP and PWOSPF routing protocol supporting link failures. *Tool: C.* Relevant Coursework: Algorithms in NLP; Database Systems and Implementation; Text Retrieval & Web Search; Operating Systems; Algorithms in Bioinformatics; Computer Networks; Computer Graphics; Computer Security.
- 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. Tool: CSIM.
- Software Development: Implemented a gas station automation software, Tools: C#, .NET, Crystal Reports.
- Programming: Participated in four ACM ICPC regionals, IUT-ICT Fest (best- 14th). Winner- Water Hackathon. Relevant Coursework: Computer Networks, Data Communication, Machine Learning, Data Mining, Artificial Intelligence, Fault-tolerant systems, Data Structures and Algorithms, Algorithms, Discrete Mathematics, Mathematical Analysis, Digital System Design, Theory of Computation, Operating Systems, Software Engineering.